# SLV-SE350/SE500/SE600/SE650/SE700/SE800/ SX600/SX700/SX800

## RMT-V259/V259A/V259K/V259L/V288/V288A

# SERVICE MANUAL

*East European Model*

*SLV-SE500R/SE700R*

*French Model*

*SLV-SE600B/SE700B/SE800B/SX700B*

*German Model*

*SLV-SE650D/SE700D1/SE800D1/*
*SX700D/SX800D*

*Italian Model*

*SLV-SE600A/SE700D2/SE800D2*

*Middle East Model*

*SLV-SE350K/SE500K/SE600N/SE700K/*
*SE700N/SE800K/SE800N*

*North European Model*

*SLV-SE600E/SE700E2/SE800E/*
*SX600E/SX700E*

*Spanish Model*

*SLV-SE700E1*

*UK Model*

*SLV-SE700G/SE700I/SE800G*

Photo: SLV-SE800

SR MECHANISM

Hi-Fi

- **Refer to the SERVICE MANUAL of VHS MECHANICAL ADJUSTMENTS VI for MECHANICAL ADJUSTMENTS. (9-921-647-11)**

* The abbreviations of SE350, SE500, SE600, SE650, SE700, SE800, SX600, SX700 and SX800 contained in this service manual are indicated when these models are common to all their corresponding models as given below.

| Abbreviated model name | SE350 | SE500 | SE600 | SE650 | SE700 | SE800 | SX600 | SX700 | SX800 |
|---|---|---|---|---|---|---|---|---|---|
| All model names<br>SLV- | SE350K | SE500K<br>SE500R | SE600A<br>SE600B<br>SE600E<br>SE600N | SE650D | SE700B, SE700D1<br>SE700D2, SE700E1<br>SE700E2, SE700G<br>SE700I, SE700K<br>SE700N.SE700R | SE800B, SE800D1<br>SE800D2, SE800E<br>SE800G, SE800K<br>SE800N | SX600E | SX700B<br>SX700D<br>SX700E | SX800D |

VHS **VIDEO CASSETTE RECORDER**

SONY®

## SPECIFICATIONS

### System

Channel coverage
SLV-SE350K, SE500K/R, SE600N,
SE700N/K/R, SE800N/K:
PAL (B/G, D/K)
VHF E2 to E12, R1 to R12
UHF E21 to E69, R21 to R69
CATV S1 to S41, S01 to S05
SLV-SE600A/E, SX600E, SE650D,
SE700D1/D2/E1/E2, SX700D/E,
SE800D1/D2/E, SX800D:
PAL (B/G)
VHF E2 to E12
VHF Italian channel A to H
UHF E21 to E69
CATV S01 to S05, S1 to S20
HYPER S21 to S41
SLV-SE600B, SE700B, SX700B, SE800B:
SECAM (L)
VHF F2 to F12
UHF F21 to F69
CATV B to Q
HYPER S21 to S41
PAL (B/G)
VHF E2 to E12
VHF Italian channel A to H
UHF E21 to E69
CATV S01 to S05, S1 to S20
HYPER S21 to S41
SLV-SE700G/I, SE800G:
PAL (I)
VHF IA to IJ, SA10 to SA13 (SLV-SE700I)
UHF B21 to B69
CATV S01 to S05, S1 to S20 (SLV-SE700I)
HYPER S21 to S41 (SLV-SE700I)

RF output signal
UHF channels 21 to 69
Aerial out
75-ohm asymmetrical aerial socket
Tape speed
SLV-SE350K, SE500K/R, SE600N,
SE700N/K/R, SE800N/K:
SP: PAL/MESECAM
23.39 mm/s (recording/playback)
NTSC 33.35 mm/s (playback only)
LP: PAL/MESECAM
11.70 mm/s (recording/playback)
NTSC 16.67 mm/s (playback only)
EP: NTSC 11.12 mm/s (playback only)
SLV-SE600A/E, SX600E, SE650D,
SE700D1/D2/E1/E2/G/I, SX700D/E,
SE800D1/D2/E/G, SX800D:
SP: PAL 23.39 mm/s (recording/playback)
NTSC 33.35 mm/s (playback only)
LP: PAL 11.70 mm/s (recording/playback)
NTSC 16.67 mm/s (playback only)
EP: NTSC 11.12 mm/s (playback only)
SLV-SE600B, SE700B, SX700B, SE800B:
SP: PAL 23.39 mm/s (recording/playback)
NTSC 33.35 mm/s (playback only)
SECAM 23.39 mm/s (recording/playback)
MESECAM 23.39 mm/s (playback only)
LP: PAL 11.70 mm/s (recording/playback)
NTSC 16.67 mm/s (playback only)
SECAM 11.70 mm/s (recording/playback)
MESECAM 11.70 mm/s (playback only)
EP: NTSC 11.12 mm/s (playback only)

## SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are “pinched” or contact high-wattage resistors.
3. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
4. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
5. Check the B+ voltage to see it is at the values specified.

**SAFETY-RELATED COMPONENT WARNING!!**

**COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.**

- Maximum recording/playback time
  - 10 hrs. in LP mode (with E300 tape)
- Fast-forward and rewind time
  - Approx. 1 min (with E180 tape)

## Inputs and outputs

- ⇄ LINE-1 (TV)
  - 21-pin
  - Video input: pin 20
  - Audio input: pins 2 and 6
  - Video output: pin 19
  - Audio output: pins 1 and 3

- DECODER/⇥ LINE-2 IN (SLV-SE600B/E, SX600E, SE650D, SE700B/D1/D2/E1/E2/N/K, SX700B/D/E)
- ⇥ LINE-2 IN (SLV-SE700G, SE700I)
  - 21-pin
  - Video input: pin 20
  - Audio input: pins 2 and 6
- DECODER/⇥ LINE-3 IN (SLV-SE500K, SE800B/D1/D2/E/N/K, SX800D)
- ⇥ LINE-3 IN (SLV-SE800G)
  - 21-pin
  - Video input: pin 20
  - Audio input: pins 2 and 6
- LINE-2-IN (SLV-SE500, SE800, SX800)
  - VIDEO IN, phono jack (1)
  - Input signal: 1 Vp-p, 75 ohms, unbalanced, sync negative
  - AUDIO IN, phono jack (1) (SLV-SE500K/R, SE800N/K)
  - AUDIO IN, phono jack (2) (EXCEPT SLV-SE500K/R, SE800N/K)
  - Input level: 327 mVrms
  - Input impedance: more than 47 kilohms
- AUDIO OUT (SLV-SE650, SE700, SX700, SE800, SX800)
  - Phono jack (2)
  - Rated output level: 327mVrms
  - Load impedance: 47 kilohms
  - Output inpedance: less than10 kilohms
- AUDIO OUT (SLV-SE500R)
  - Phono jack (1)
  - Rated output level: 327 mVrms
  - Load impedance: 47 kilohms
  - Output impedance: less than 10 kilohms

## General

- Power requirements
  - 220 - 240 V AC, 50 Hz
- Power consumption
  - 21 W
- Operating temperature
  - 5ºC to 40ºC
- Storage temperature
  - –20ºC to 60ºC
- Dimensions including projecting parts and controls
  - Approx. 430 × 100 × 283 mm (w/h/d) (EXCEPT SLV-SE800, SX800)
  - Approx. 430 × 100 × 290 mm (w/h/d) (SLV-SE800, SX800)
- Mass
  - Approx. 4.3 kg (EXCEPT SLV-SE800, SX800)
  - Approx. 4.4 kg (SLV-SE800, SX800)

## Supplied accessories

Remote commander (1)
R6 (size AA) batteries (2)
Aerial cable (1)

Design and specifications are subject to change without notice.

- **Feature Difference**

| SLV-<br>FEATURE | SE350K | SE500K | SE500R | SE600A | SE600B | SE600E | SE600N | SE650D | SE700B | SE700D1 |
|---|---|---|---|---|---|---|---|---|---|---|
| HEAD/CH | 2/2 | 4/4 | 4/4 | 4/6 | 4/6 | 4/6 | 4/6 | 4/6 | 4/6 | 4/6 |
| SECAM(REC/PB) | ×/× | ×/× | ×/× | ×/× | ○/○ | ×/× | ×/× | ×/× | ○/○ | ×/× |
| ME-SECAM(REC/PB) | ○/○ | ○/○ | ○/○ | ×/× | ×/○ | ×/× | ○/○ | ×/× | ×/○ | ×/× |
| EURO INPUT | 21pin | 21pin × 2 | 21pin | 21pin | 21pin × 2 | 21pin × 2 | 21pin | 21pin × 2 | 21pin × 2 | 21pin × 2 |
| RCA FRONT LINE INPUT | × | 2pin (B.Y) | 2pin (B.Y) | × | × | × | × | × | × | × |
| ADDITIONAL REAR OUTPUT (AUDIO OUT) | × | × | 1pin (B) | × | × | × | × | 2pin (R.W) | 2pin (R.W) | 2pin (R.W) |
| MODULATOR SYSTEM | G/K | G/K | G/K | G | L/G | G | G/K | G | L/G | G |
| REMOTE COMMANDER RMT- | V288 | V259 | V259 | V288 | V288A | V288 | V288 | V288 | V259A | V259 |

| SLV-<br>FEATURE | SE700D2 | SE700E1 | SE700E2 | SE700G | SE700I | SE700K | SE700N | SE700R | SE800B | SE800D1 |
|---|---|---|---|---|---|---|---|---|---|---|
| HEAD/CH | 4/6 | 4/6 | 4/6 | 4/6 | 4/6 | 4/6 | 4/6 | 4/6 | 4/6 | 4/6 |
| SECAM(REC/PB) | ×/× | ×/× | ×/× | ×/× | ×/× | ×/× | ×/× | ×/× | ○/○ | ×/× |
| ME-SECAM(REC/PB) | ×/× | ×/× | ×/× | ×/× | ×/× | ○/○ | ○/○ | ○/○ | ×/○ | ×/× |
| EURO INPUT | 21pin × 2 | 21pin × 2 | 21pin × 2 | 21pin × 2 | 21pin × 2 | 21pin × 2 | 21pin × 2 | 21pin | 21pin × 2 | 21pin × 2 |
| RCA FRONT LINE INPUT | × | × | × | × | × | × | × | × | 3pin (R.W.Y) | 3pin (R.W.Y) |
| ADDITIONAL REAR OUTPUT (AUDIO OUT) | 2pin (R.W) | 2pin (R.W) | 2pin (R.W) | 2pin (R.W) | 2pin (R.W) | 2pin (R.W) | 2pin (R.W) | 2pin (R.W) | 2pin (R.W) | 2pin (R.W) |
| MODULATOR SYSTEM | G | G | G | I | I | G/K | G/K | G/K | L/G | G |
| REMOTE COMMANDER RMT- | V259 | V259 | V259 | V259K | V259I | V259 | V259 | V259 | V259L | V259K |

| SLV-<br>FEATURE | SE800D2 | SE800E | SE800G | SE800K | SE800N | SX600E | SX700B | SX700D | SX700E | SX800D |
|---|---|---|---|---|---|---|---|---|---|---|
| HEAD/CH | 4/6 | 4/6 | 4/6 | 4/6 | 4/6 | 4/6 | 4/6 | 4/6 | 4/6 | 4/6 |
| SECAM(REC/PB) | ×/× | ×/× | ×/× | ×/× | ×/× | ×/× | ○/○ | ×/× | ×/× | ×/× |
| ME-SECAM(REC/PB) | ×/× | ×/× | ×/× | ○/○ | ○/○ | ×/× | ×/○ | ×/× | ×/× | ×/× |
| EURO INPUT | 21pin × 2 | 21pin × 2 | 21pin × 2 | 21pin × 2 | 21pin × 2 | 21pin × 2 | 21pin × 2 | 21pin × 2 | 21pin × 2 | 21pin × 2 |
| RCA FRONT LINE INPUT | 3pin (R.W.Y) | 3pin (R.W.Y) | 3pin (R.W.Y) | 3pin (R.W.Y) | 3pin (R.W.Y) | × | × | × | × | 3pin (R.W.Y) |
| ADDITIONAL REAR OUTPUT (AUDIO OUT) | 2pin (R.W) | 2pin (R.W) | 2pin (R.W) | 2pin (R.W) | 2pin (R.W) | × | 2pin (R.W) | 2pin (R.W) | 2pin (R.W) | 2pin (R.W) |
| MODULATOR SYSTEM | G | G | I | G/K | G/K | G | L/G | G | G | G |
| REMOTE COMMANDER RMT- | V259K | V259K | V259L | V259 | V259 | V288 | V259L | V259K | V259K | V259 |

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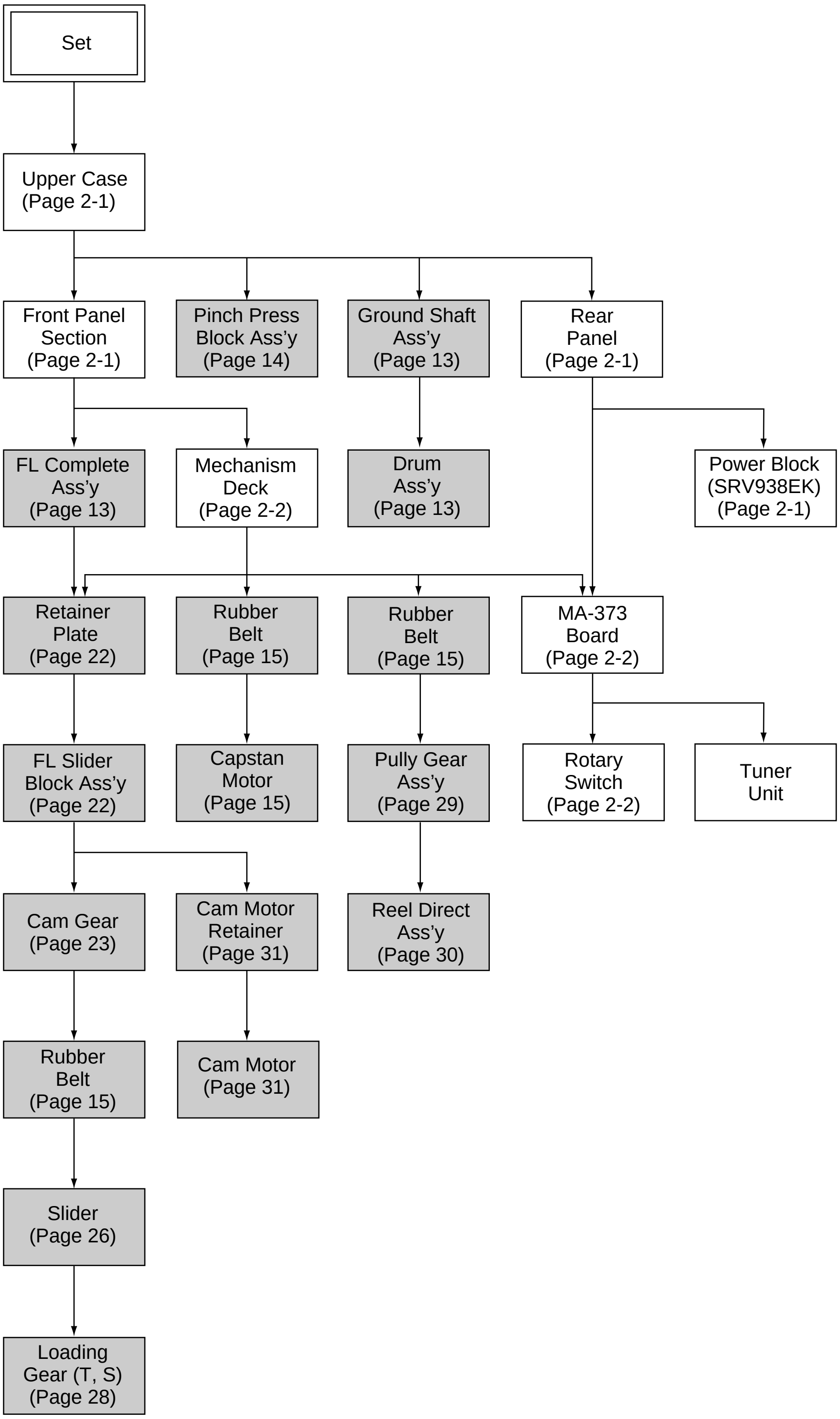
# SERVICE NOTE

## 1. DISASSEMBLY

- This set can be disassembled in the order shown below.

**Note:** Pages in ☐ indicated pages in the SERVICE MANUAL.
Pages in ▨ indicated pages in the VHS MECHANICAL ADJUSTMENT MANUAL VI.


Set
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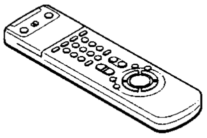
# SECTION 1
# GENERAL

This section is extracted from SLV-SE800N/K instruction manual. (3-868-277-11)

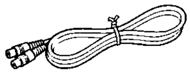
## Step 1 : Unpacking

Check that you have received the following items with the VCR:

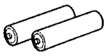
- Remote commander



- Aerial cable



- R6 (size AA) batteries



### Check your model name

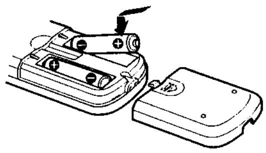
The instructions in this manual are for the 9 models: SLV-SE350K, SE500K, SE500R, SE600N, SE700N, SE700K, SE700R, SE800N, and SE800K. Check your model number by looking at the rear panel of your VCR.
SLV-SE800N is the model used for illustration purposes. Any difference in operation is clearly indicated in the text, for example, "SLV-SE500K only."

## Step 2 : Setting up the remote commander

### Inserting the batteries

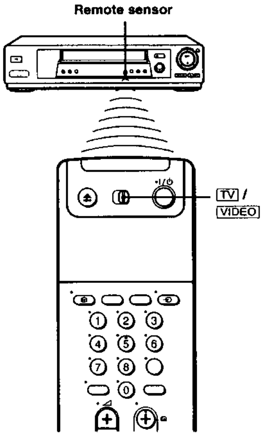
Insert two R6 (size AA) batteries by matching the + and – on the batteries to the diagram inside the battery compartment.

Insert the negative (–) end first, then push in and down until the positive (+) end clicks into position.



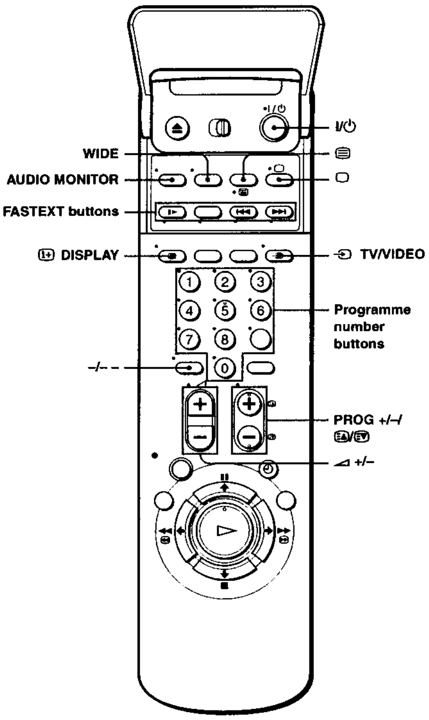
### Using the remote commander

You can use this remote commander to operate this VCR and a Sony TV. Buttons on the remote commander marked with a dot (•) can be used to operate your Sony TV. If the TV does not have the ■ symbol near the remote sensor, this remote commander will not operate the TV.



| To operate | Set TV / VIDEO to |
|---|---|
| the VCR | VIDEO and point at the remote sensor at the VCR |
| a Sony TV | TV and point at the remote sensor at the TV |

continued



### TV control buttons

| To | Press |
|---|---|
| Set the TV to standby mode | I/⏻ |
| Select an input source: aerial in or line in | ⇥ TV/VIDEO |
| Select the TV's programme position | Programme number buttons, -/- -, PROG +/– |

| To | Press |
|---|---|
| Adjust the volume of the TV | ⊿ +/– |
| Switch to TV (Teletext off)* | ▢ (TV) |
| Switch to Teletext* | ⊜ (Teletext) |
| Select the sound | AUDIO MONITOR |
| Use FASTEXT* | FASTEXT buttons |
| Call up the on-screen display | (i+) DISPLAY |
| Change the Teletext page* | (≡▲)/(≡▼) |
| Switch to/from wide mode of a Sony wide TV (For other manufactures' wide TVs, see "Controlling other TVs with the remote commander (not available on SLV-SE350K and SE600N)" below.) | WIDE |

**Notes**
- With normal use, the batteries should last about three to six months.
- If you do not use the remote commander for an extended period of time, remove the batteries to avoid possible damage from battery leakage.
- Do not use a new battery together with an old one.
- Do not use different types of batteries together.
- Some buttons may not work with certain Sony TVs.

* not available on SLV-SE350K and SE600N

### Controlling other TVs with the remote commander (not available on SLV-SE350K and SE600N)

The remote commander is preprogrammed to control non-Sony TVs. If your TV is listed in the following table, set the appropriate manufacturer's code number.

1. Set TV / VIDEO at the top of the remote commander to TV.
2. Hold down I/⏻, and enter your TV's code number using the programme number buttons. Then release I/⏻.

   Now you can use the following TV control buttons to control your TV:

   I/⏻, ⇥ TV/VIDEO, programme number buttons, -/- - (ten's digit), PROG +/–, ⊿ +/–, ▢ (TV), ⊜ (Teletext), FASTEXT buttons, WIDE*, MENU*, ↑/↓/←/→*, and OK*.

* These buttons may not work with all TVs.

continued

### Code numbers of controllable TVs

If more than one code number is listed, try entering them one at a time until you find the one that works with your TV.

To switch to wide mode, see the footnotes below this table for the applicable code numbers.

| Manufacturer | Code number |
|---|---|
| Sony | 01*1, 02 |
| Akai | 68 |
| Ferguson | 52 |
| Grundig | 10*1, 11*1 |
| Hitachi | 24 |
| JVC | 33 |
| Loewe | 45 |
| Mivar | 09, 70 |
| NEC | 66 |
| Nokia | 15, 16, 69*3 |

| Manufacturer | Code number |
|---|---|
| Panasonic | 17*1, 49 |
| Philips | 06*1, 07*1, 08*1 |
| Saba | 12, 13 |
| Samsung | 22, 23 |
| Sanyo | 25 |
| Sharp | 29 |
| Telefunken | 36 |
| Thomson | 43*2 |
| Toshiba | 38 |

*1 Press WIDE to switch the wide picture mode on or off.

*2 Press WIDE, then press ⊿ +/– to select the wide picture mode you want.

*3 Press WIDE. The menu appears on the TV screen. Then, press ↑/↓/←/→ to select the wide picture you want and press OK.

**Tip**

- To see if you set your TV's code number correctly, try turning your TV on and off with the I/⏻ button.

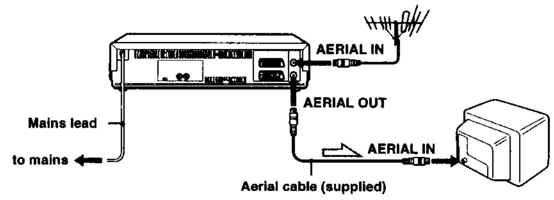
**Notes**

- If you enter a new code number, the code number previously entered will be erased.
- If the TV uses a different remote control system from the one programmed to work with the VCR, you cannot control your TV with the remote commander.
- When you replace the batteries of the remote commander, the code number may change. Set the appropriate code number every time you replace the batteries.

# Step 3 : Connecting the VCR

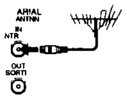
If your TV has a Scart (EURO-AV) connector, see page 10.

## If your TV does not have a Scart (EURO-AV) connector

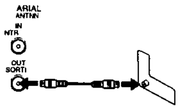


▷ : Signal flow

**1** Disconnect the aerial cable from your TV and connect it to AERIAL IN on the rear panel of the VCR.



**2** Connect AERIAL OUT of the VCR and the aerial input of your TV using the supplied aerial cable.



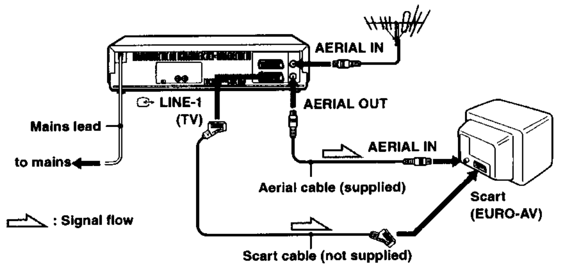
**3** Connect the mains lead to the mains.

**Note**

- When you connect the VCR and your TV only with an aerial cable, you have to tune your TV to the VCR (see page 14).

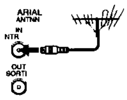
continued

## If your TV has a Scart (EURO-AV) connector

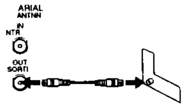


▷ : Signal flow

**1** Disconnect the aerial cable from your TV and connect it to AERIAL IN on the rear panel of the VCR.

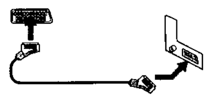


**2** Connect AERIAL OUT of the VCR and the aerial input of your TV using the supplied aerial cable.



**3** Connect LINE-1 (TV) on the VCR and the Scart (EURO-AV) connector on the TV with the optional Scart cable.

This connection improves picture and sound quality. Whenever you want to watch the VCR picture, press ⊕ TV/VIDEO to display the VIDEO indicator in the display window.

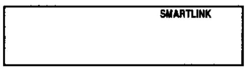


**4** Connect the mains lead to the mains.

**Note**

- If the TV is connected to the LINE-1 (TV) connector, setting the RF channel to OFF is recommended. In the OFF position, only the signal from the aerial is output through the AERIAL OUT connector (see page 16).

## About the SMARTLINK features (not available on SLV-SE600N and SE700R)



If the connected TV complies with SMARTLINK, MEGALOGIC*1, EASYLINK*2, Q-Link*3, EURO VIEW LINK*4, or T-V LINK*5, this VCR automatically runs the SMARTLINK function after you complete the steps on the previous page (the SMARTLINK indicator appears in the VCR's display window when you turn on the TV). You can enjoy the following SMARTLINK features.

- Preset Download
  You can download your TV tuner preset data to this VCR and tune the VCR according to that data in Auto Set Up. This greatly simplifies the Auto Set Up procedure. Be careful not to disconnect the cables or exit the Auto Set Up function during the procedure.
  See "Setting up the VCR with the Auto Set Up function" on page 17.
- TV Direct Rec
  You can easily record what you are watching on the TV. For details, see "Recording what you are watching on the TV (TV Direct Rec) (not available on SLV-SE600N and SE700R)" on page 47.
- One Touch Play
  With One Touch Play, you can start playback automatically without turning on the TV. For details, see "Starting playback automatically with one button (One Touch Play) (not available on SLV-SE600N and SE700R)" on page 43.
- One Touch Menu
  You can turn on the VCR and TV, set the TV to the video channel, and display the VCR's on-screen display automatically by pressing MENU on the remote commander.
- One Touch Timer
  You can turn on the VCR and TV, set the TV to the video channel, and display the timer recording menu (the TIMER METHOD menu, the TIMER menu, or the SHOWVIEW menu) automatically by pressing ⏲ TIMER on the remote commander.
  You can set which timer recording menu is displayed using TIMER OPTIONS in the OPTIONS-2 menu (see page 79).
- Automatic Power Off
  You can have the VCR turn off automatically, if the VCR is not used after you turn off the TV.

*1 "MEGALOGIC" is a registered trademark of Grundig Corporation.

*2 "EASYLINK" is a trademark of Philips Corporation.

*3 "Q-Link" is a trademark of Panasonic Corporation.

*4 "EURO VIEW LINK" is a trademark of Toshiba Corporation.

*5 "T-V LINK" is a trademark of JVC Corporation.

**Note**

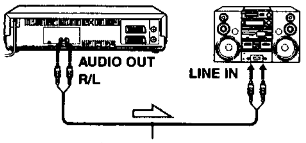
- Not all TVs respond to the functions above.

continued

## Additional connections

**To a stereo system (SLV-SE700N/K and SE800N only)**

You can improve sound quality by connecting a stereo system to the AUDIO OUT R/L jacks as shown on the right.

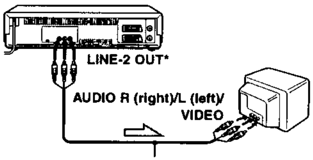


Audio cable (not supplied)

⇨ : Signal flow

**To a TV with audio and video jacks (SLV-SE500R, SE700R and SE800K only)**

If your TV does not have a Scart (EURO-AV) connector, you can improve sound and picture quality by connecting your TV to the LINE-2 OUT jacks as shown on the right.



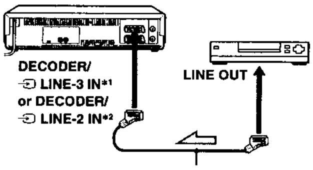
Audio/video cable (not supplied)

⇨ : Signal flow

* SLV-SE500R has only AUDIO L (left) and VIDEO jacks.

**To a satellite or digital tuner with Line Through (not available on SLV-SE350K, SE500R, SE600N and SE700R)**

Using the Line Through function, you can watch programmes from a satellite or digital tuner connected to this VCR on the TV even when the VCR is turned off. When you turn on the satellite or digital tuner, this VCR automatically sends the signal from the satellite or digital tuner to the TV without turning itself on.



Scart cable (not supplied)

⇨ : Signal flow

**1** Connect the satellite or digital tuner to the DECODER/LINE-3 IN*1 (or DECODER/LINE-2 IN*2) connector as shown above.

**2** Set DECODER/LINE3*1 (or DECODER/LINE2*2) to LINE3*1 (or LINE2*2) in the OPTIONS-2 menu.

**3** Set POWER SAVE to OFF in the OPTIONS-2 menu.

**4** Turn off the VCR.

To watch a programme, turn on the satellite or digital tuner and the TV.

**Note**

- You cannot watch programmes on the TV while recording unless you are recording a satellite or digital programme.

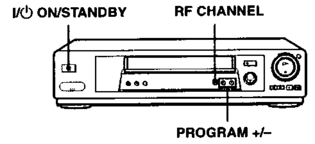
*1 SLV-SE500K and SE800N/K only
*2 SLV-SE700N/K only

# Step 4 : Tuning your TV to the VCR

If your TV has a Scart (EURO-AV) connector, see page 16.

### If your TV does not have a Scart (EURO-AV) connector

Follow the steps below so that your TV will properly receive the video signals from your VCR.



**1** ONSTAN I/⏻

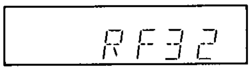
Press I/⏻ ON/STANDBY to turn on the VCR.

**2** AUTO ST UP R CANNL

Press RF CHANNEL on the VCR lightly.

The factory-preset RF channel appears in the display window.

The VCR signal is output through this channel to the TV.



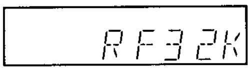
**3** Turn on your TV and select a programme position for the VCR picture.

This programme position will now be referred to as the video channel.

**4** AUTO ST UP R CANNL

Press RF CHANNEL.

The TV system appears in the display window.

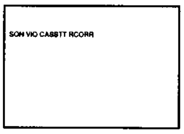


**5** PROGRA – + TRACING

Press PROGRAM +/– (repeatedly) to select the appropriate TV system for your area.

Select "G" for the B/G TV system, or "K" for the D/K TV system.

**6** Tune the TV to the same channel shown in the VCR display window so that the picture on the right appears clearly on the TV screen.



Refer to your TV manual for TV tuning instructions.

If you select the wrong TV system in step 5, the picture on the right may not appear. Select the appropriate TV system and tune the TV again.

If the picture does not appear clearly, see "To obtain a clear picture from the VCR" below.

**7** AUTO ST UP R CANNL

Press RF CHANNEL.

You have now tuned your TV to the VCR. Whenever you want to play a tape, set the TV to the video channel.

### To check to see if the TV tuning is correct

Set the TV to the video channel and press PROGRAM +/– on the VCR. If the TV screen changes to a different programme each time you press PROGRAM +/–, the TV tuning is correct.

### To obtain a clear picture from the VCR

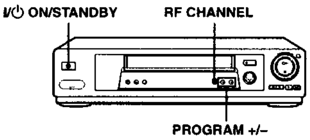
If the screen does not appear clearly in step 6 above, go to step 7 to finish this procedure once. Then start again from step 2. After pressing RF CHANNEL in step 2, press PROGRAM +/– while the RF channel is displayed, so that another RF channel appears. Then tune the TV to the new RF channel so that a clear picture appears.

**Note**

- If you set the wrong TV system, you may have no sound or sound may be distorted.

continued

### If your TV has a Scart (EURO-AV) connector



**1**

Press I/⏻ ON/STANDBY to turn on the VCR.

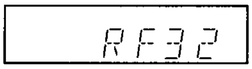
**2**

AUTO
ST UP
R CANNL

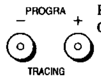
Press RF CHANNEL on the VCR lightly.

The factory-preset RF channel appears in the display window.

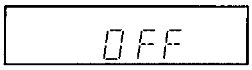
The VCR signal is output through this channel to the TV.



**3**



Press PROGRAM +/– to set the RF channel to OFF, and press RF CHANNEL again.

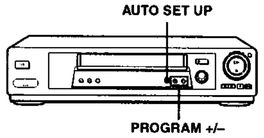


AUTO
ST UP
R CANNL

RF channel set up is complete.

## Step 5 : Setting up the VCR with the Auto Set Up function

Before using the VCR for the first time, set up the VCR using the Auto Set Up function. With this function, you can set the language for the on-screen display, TV channels, guide channels for the ShowView system*, and VCR clock* automatically.

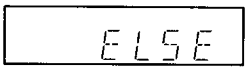


**1**

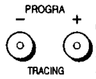
AUTO
ST UP
R CANNL

Hold down AUTO SET UP on the VCR for more than three seconds.

The VCR automatically turns on, and the country abbreviation appears in the display window.



**2**



Press PROGRAM +/– to select the abbreviation of your country from the table on page 18.

For some countries, there is a selection of languages to choose from.

If your country does not appear, select ELSE.

continued

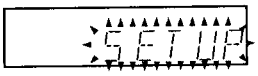
**3**

AUTO
ST UP
R CANNL

Press AUTO SET UP lightly.

The VCR starts searching for all of the receivable channels and presets them according to the TV system you selected in "Tuning your TV to the VCR" on page 14.

If you want to change the order of the channels or disable unwanted programme positions, see "Changing/disabling programme positions" on page 30.



If you use the SMARTLINK connection (not available on SLV-SE600N and SE700R), the Preset Download function starts and the SMARTLINK indicator flashes in the display window during download.

After the search or download is complete, the current time appears in the display window for any stations that transmit a time signal (not available on SLV-SE500R, SE600N and SE700R).

**The abbreviations of the countries and languages are as follows:**

| Abbreviation | Country | Language |
|---|---|---|
| CZ | Checho | Czech |
| HUN | Hungary | Hungarian |
| PL | Poland | Polish |
| SK | Slovakia | Slovak |
| TR | Turkey | Turkish |
| RUS | Russia | Russian |
| ELSE | Other countries | English |

**To cancel the Auto Set Up function**

Press AUTO SET UP.

**Tip**

- If you want to change the language for the on-screen display from the one preset in the Auto Set Up function, see page 24.

**Notes**

- If you stop the Auto Set Up function during step 3, you must repeat set up from step 1.
- Whenever you operate the Auto Set Up function, some of the settings (ShowView*, timer, etc.) will be reset. If this happens, you have to set them again.

* not available on SLV-SE500R, SE600N and SE700R

## Step 6 : Setting the clock

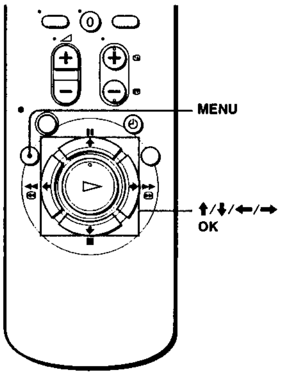
You must set the time and date on the VCR to use the timer features properly.

The Auto Clock Set function (not available on SLV-SE500R, SE600N and SE700R) works only if a station in your area is broadcasting a time signal. If the Auto Set Up function did not set the clock correctly for your local area, try another station for the Auto Clock Set function (see page 22).

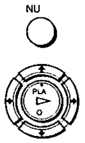
### Setting the clock manually

**Before you start...**

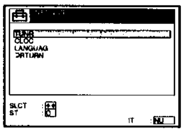
- Turn on the VCR and the TV.
- Set the TV to the video channel.



**1**



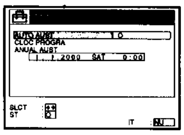
Press MENU, then press ↑/↓ to highlight SETTINGS and press OK.



**2**

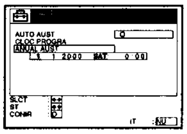
Press ↑/↓ to highlight CLOCK, then press OK.

For SLV-SE500R, SE600N and SE700R, only the clock setting menu appears. Skip the next step and go to step 4.

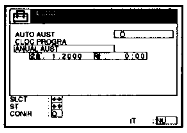


continued

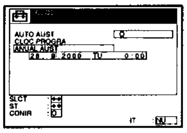
**3** Press ↑/↓ to highlight MANUAL ADJUST, then press OK.


AUTO AUST
CLOC PROGRA
ANUAL AUST
1 1 2000 SAT 0:00
SLCT
ST
CONIR
IT
NU

**4** Press ↑/↓ to set the day.

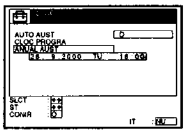

AUTO AUST
CLOC PROGRA
ANUAL AUST
28 1 2000 0:00
SLCT
ST
CONIR
IT
NU

**5** Press → to highlight the month and set the month pressing ↑/↓.

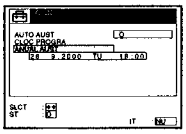

AUTO AUST
CLOC PROGRA
ANUAL AUST
28 9 2000 TU 0:00
SLCT
ST
CONIR
IT
NU

**6** Set the year, hour, and minutes in sequence, pressing → to highlight the item to be set, and press ↑/↓ to select the digits.

The day of the week is set automatically.


AUTO AUST
CLOC PROGRA
ANUAL AUST
28 9 2000 TU 18:00
SLCT
ST
CONIR
IT
NU

**7** Press OK to start the clock.


AUTO AUST
CLOC PROGRA
ANUAL AUST
28 9 2000 TU 18:00
SLCT
ST
IT
NU

**8** Press MENU to exit the menu.

**Tips**

- To change the digits while setting, press ← to return to the item to be changed, and select the digits by pressing ↑/↓.
- If you want to return to the previous menu, highlight RETURN and press OK.

**Note**

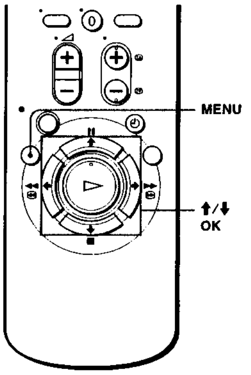
- The menu disappears automatically if you don't proceed for more than a few minutes.

continued

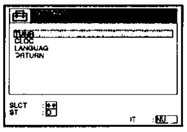
## Changing the station for the Auto Clock Set function (not available on SLV-SE500R, SE600N and SE700R)

**Before you start...**

- Turn on the VCR and the TV.
- Set the TV to the video channel.

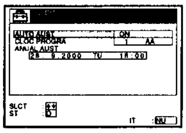


**1** Press MENU, then press ↑/↓ to highlight SETTINGS and press OK.

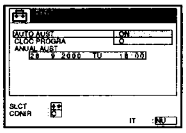

TUNER
CLOC
LANGUAG
RTURN
SLCT
ST
IT
NU

**2** Press ↑/↓ to highlight CLOCK, then press OK.

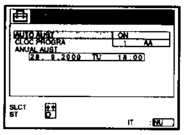
AUTO ADJUST is highlighted.


AUTO AUST
CLOC PROGRA
ANUAL AUST
ON
1 AA
28 9 2000 TU 18:00
SLCT
ST
IT
NU

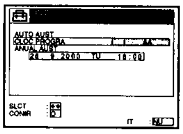
**3** Press OK.


AUTO AUST
CLOC PROGRA
ANUAL AUST
ON
O
28 9 2000 TU 18:00
SLCT
CONIR
IT
NU

**4** Press ↑/↓ to highlight ON, then press OK.

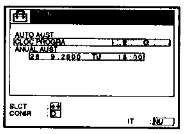

AUTO AUST
CLOC PROGRA
ANUAL AUST
ON
1 AA
28 9 2000 TU 18:00
SLCT
ST
IT
NU

**5** Press ↓ to highlight CLOCK PROGRAM, then press OK.


AUTO AUST
CLOC PROGRA
ANUAL AUST
AA
28 9 2000 TU 18:00
SLCT
CONIR
IT
NU

**6** Press ↑/↓ repeatedly until the programme position of the station that carries a time signal appears.

If the VCR does not receive a time signal from any station, AUTO ADJUST returns to OFF automatically.


AUTO AUST
CLOC PROGRA
ANUAL AUST
28 9 2000 TU 18:00
SLCT
CONIR
IT
NU

**7** Press MENU to exit the menu.

**Tips**

- If you set AUTO ADJUST to ON, the Auto Clock Set function is activated whenever the VCR is turned off. The time is adjusted automatically by making reference to the time signal from the station whose programme position is displayed in the "CLOCK PROGRAM" row. If you do not need the Auto Clock Set, select OFF.
- If you want to return to the previous menu, highlight RETURN and press OK.

**Note**

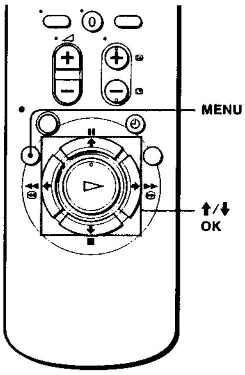
- The menu disappears automatically if you don't proceed for more than a few minutes.

# Selecting a language

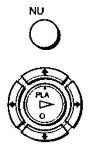
You can change the on-screen display language from the one you selected with the Auto Set Up function.

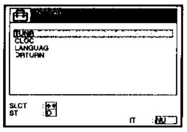
**Before you start...**

- Turn on the VCR and the TV.
- Set the TV to the video channel.

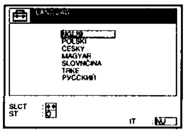


**1** Press MENU, then press ↑/↓ to highlight SETTINGS and press OK.




TUNR
CLOC
LANGUAG
>RTURN
SLCT
ST
IT
NU

**2** Press ↑/↓ to highlight LANGUAGE, then press OK.


LANGUAG
NGLIS
POLSKI
ČESKY
MAGYAR
SLOVNČINA
TRKE
PYCCKИЙ
SLCT
ST
IT
NU

**3** Press ↑/↓ to highlight the desired language, then press OK.

**4** Press MENU to exit the menu.

**Tip**

- If you want to return to the previous menu, highlight RETURN and press OK.

**Note**

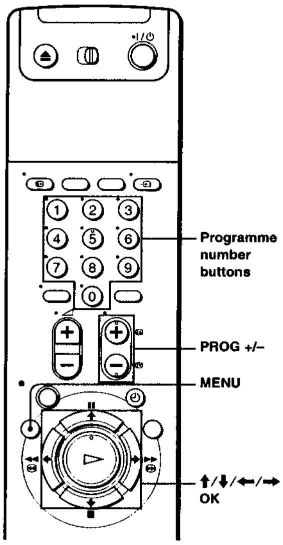
- The menu disappears automatically if you don't proceed for more than a few minutes.

# Presetting channels

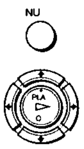
If some channels could not be preset using the Auto Set Up function, you can preset them manually.

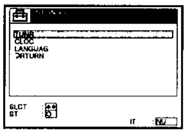
**Before you start...**

- Turn on the VCR and the TV.
- Set the TV to the video channel.

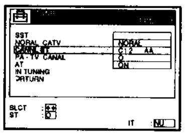

•I/⏻
Programme number buttons
PROG +/–
MENU
↑/↓/←/→
OK

**1** Press MENU, then press ↑/↓ to highlight SETTINGS and press OK.

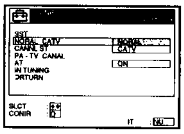



TUNR
CLOC
LANGUAG
>RTURN
SLCT
ST
IT
NU

**2** Press ↑/↓ to highlight TUNER, then press OK.

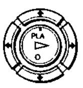

SST
NORAL CATV
CANNL ST
PA - TV CANAL
AT
IN TUNING
>RTURN
NORAL
C12 AA
O
ON
SLCT
ST
IT
NU

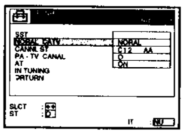
**3** Press ↑/↓ to highlight NORMAL/CATV, then press OK.


SST
NORAL CATV
CANNL ST
PA - TV CANAL
AT
IN TUNING
>RTURN
NORAL
CATV
ON
SLCT
CONIR
IT
NU

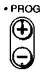
**4** Press ↑/↓ to highlight NORMAL, then press OK.

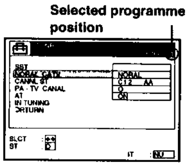
To preset CATV (Cable Television) channels, select CATV.



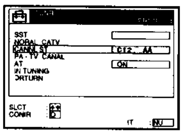

SST
NORAL CATV
CANNL ST
PA - TV CANAL
AT
IN TUNING
>RTURN
NORAL
C12 AA
O
ON
SLCT
ST
IT
NU

**5** Press PROG +/– to select the programme position.



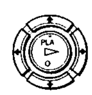

Selected programme position
SST
NORAL CATV
CANNL ST
PA - TV CANAL
AT
IN TUNING
>RTURN
NORAL
C12 AA
O
ON
SLCT
ST
IT
NU

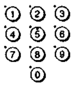
**6** Press ↑/↓ to highlight CHANNEL SET, then press OK.


SST
NORAL CATV
CANNL ST
PA - TV CANAL
AT
IN TUNING
>RTURN
C12 AA
ON
SLCT
CONIR
IT
NU

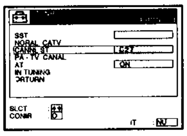
continued

**7**





Press ↑/↓ repeatedly until the channel you want is displayed.

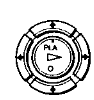


The channels appear in the following order:

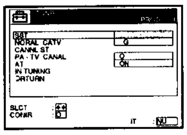
| B/G TV system | | D/K TV system | |
|---|---|---|---|
| **Channel number in the CHANNEL SET field** | **Receivable Channel** | **Channel number in the CHANNEL SET field** | **Receivable Channel** |
| C02 | E2 | C02 | R1 |
| C03 | E3 | C05 | R6 |
| C04 | E4 | C06 | R7 |
| C05 | E5 | C12 | R12 |
| C06 | E6 | C13 | R2 |
| C07 | E7 | C14 | R3 |
| C08 | E8 | C15 | R4 |
| C09 | E9 | C16 | R5 |
| C10 | E10 | C17 | R8 |
| C11 | E11 | C18 | R9 |
| C12 | E12 | C19 | R10 |
| C21–C69 | E21–E69 | C20 | R11 |
| S01–S41 | S1–S41 | C21–C69 | R21–R69 |
| S42–S46 | S01–S05 | | |

If you know the number of the channel you want, press the programme number buttons. For example, for channel 5, first press "0" and then press "5."

**8**



If the TV sound is distorted or noisy, press ↑/↓ to highlight SYSTEM and press OK. Then press ↑/↓ to select B/G or D/K so that you get better sound.



**9**

To preset another programme position, repeat steps 5 through 7.

**10**

Press MENU to exit the menu.

### If the picture is not clear

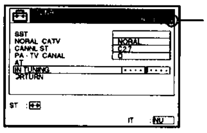
Normally, the Auto Fine Tuning (AFT) function automatically tunes in channels clearly. However, if the picture is not clear, you may also use the manual tuning function.

**1** Press PROG +/– or the programme number buttons to select the programme position for which you cannot obtain a clear picture.

**2** Press MENU, then select SETTINGS and press OK.

**3** Select TUNER, then press OK.

**4** Select FINE TUNING, then press OK.
The fine tuning meter appears.



**Selected programme position**

**5** Press ←/→ to get a clearer picture, then press MENU to exit the menu.
Note that the AFT (Auto Fine Tuning) setting switches to OFF.

**Tip**

- If you want to return to the previous menu, highlight RETURN and press OK.

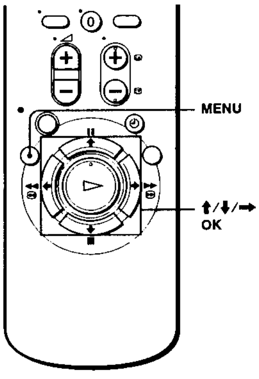
**Notes**

- The menu disappears automatically if you don't proceed for more than a few minutes.
- When adjusting FINE TUNING, the menu may become difficult to read due to interference from the picture being received.

## Changing/disabling programme positions

After setting the channels, you can change the programme positions as you like. If any programme positions are unused or contain unwanted channels, you can disable them.

You can also change the station names (not available on SLV-SE500R, SE600N and SE700R). If the station names are not displayed, you can enter them manually.

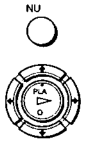


### Changing programme positions

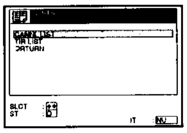
**Before you start…**

- Turn on the VCR and the TV.
- Set the TV to the video channel.

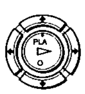
**1**



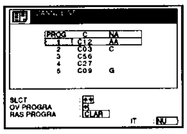
Press MENU, then press ↑/↓ to highlight LISTS and press OK.



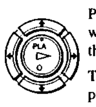
**2**



Press ↑/↓ to highlight CHANNEL LIST, then press OK.

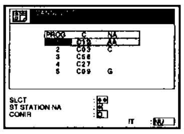


**3**

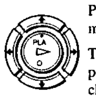


Press ↑/↓ to highlight the row which you want to change the programme position, then press →.

To display other pages for programme positions 6 to 60, press ↑/↓ repeatedly.

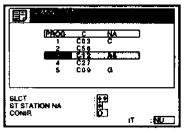


**4**

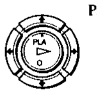


Press ↑/↓ until the selected channel row moves to the desired programme position.

The selected channel is inserted at the new programme position and the intermediate channels are displaced to fill the gap.



**5**



Press OK to confirm the setting.

**6**

To change the programme position of another station, repeat steps 3 through 5.

**7**

Press MENU to exit the menu.

**Tip**

- If you want to return to the previous menu, highlight RETURN and press OK.

**Note**

- The menu disappears automatically if you don't proceed for more than a few minutes.

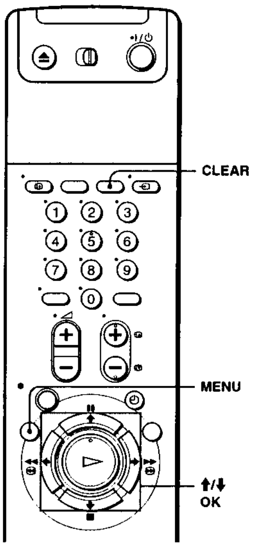
continued

## Disabling unwanted programme positions

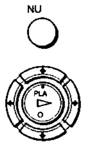
After presetting channels, you can disable unused programme positions. The disabled positions will be skipped later when you press the PROG +/– buttons.

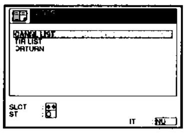
**Before you start...**

- Turn on the VCR and the TV.
- Set the TV to the video channel.

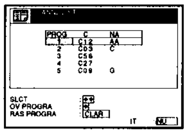

CLEAR
MENU
↑/↓
OK

**1** Press MENU, then press ↑/↓ to highlight LISTS, and press OK.

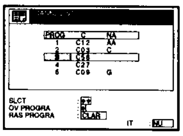



CHANNEL LIST
TIMER LIST
RETURN
SLCT
ST
IT
NU

**2** Press ↑/↓ to highlight CHANNEL LIST, then press OK.

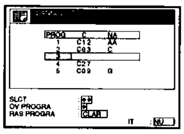

PROG C NA
1 C12 AA
2 C03 C
3 C56
4 C27
5 C09 G
SLCT
OV PROGRA
RAS PROGRA
CLAR
IT
NU

**3** Press ↑/↓ to highlight the row which you want to disable.


PROG C NA
1 C12 AA
2 C03 C
3 C56
4 C27
5 C09 G
SLCT
OV PROGRA
RAS PROGRA
CLAR
IT
NU

**4** Press CLEAR.

The selected row will be cleared as shown on the right.


PROG C NA
1 C12 AA
2 C03 C
3
4 C27
5 C09 G
SLCT
OV PROGRA
RAS PROGRA
CLAR
IT
NU

**5** Repeat steps 3 and 4 for any other programme positions you want to disable.

**6** Press MENU to exit the menu.

**Tip**

- If you want to return to the previous menu, highlight RETURN and press OK.

**Notes**

- The menu disappears automatically if you don't proceed for more than a few minutes.
- Be sure to select the programme position you want to disable correctly. If you disable a programme position by mistake, you need to reset that channel manually.

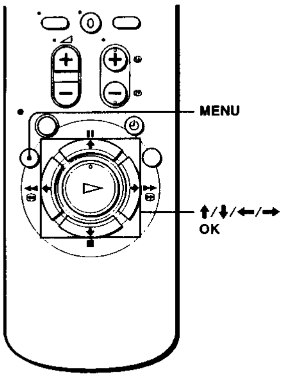
continued

## Changing the station names (not available on SLV-SE500R, SE600N and SE700R)

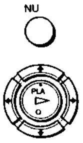
You can change or enter the station names (up to 5 characters). The VCR must receive channel information (for instance, SMARTLINK information) for station names to appear automatically.

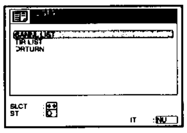
**Before you start...**

- Turn on the VCR and the TV.
- Set the TV to the video channel.

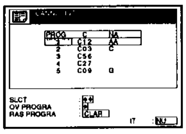


**1** Press MENU, then press ↑/↓ to highlight LISTS and press OK.



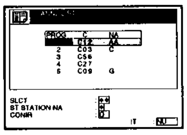

CHANNEL LIST
TIMER LIST
RETURN
SLCT
ST
IT
NU

**2** Press ↑/↓ to highlight CHANNEL LIST, then press OK.

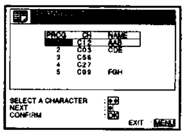

PROG C NA
1 C12 AA
2 C03 C
3 C56
4 C27
5 C09 G
SLCT
OV PROGRA
RAS PROGRA
CLAR
IT
NU

**3** Press ↑/↓ to highlight the row which you want to change or enter the station name, then press →.

To display other pages for programme positions 6 to 60, press ↑/↓ repeatedly.


PROG C NA
1 C12 AA
2 C03 C
3 C56
4 C27
5 C09 G
SLCT
ST STATION NA
CONIR
IT
NU

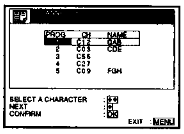
**4** Press →


PROG CH NAME
1 C12 AAB
2 C03 CDE
3 C56
4 C27
5 C09 FGH
SELECT A CHARACTER
NEXT
CONFIRM
OK
EXIT
MENU

**5** Enter the station name.

1. Press ↑/↓ to select a character.
   Each time you press ↑, the character changes as shown below.
   **A → B → ... → Z → a → b → ... → z → 0 → 1 → ... → 9 → (symbols) → (blank space) → A**
2. Press → to set the next character.
   The next space is highlighted.
   To correct a character, press ←/→ until the character you want to correct is highlighted, then reset it.

   You can set up to 5 characters for the station name.


PROG CH NAME
1 C12 GAB
2 C03 CDE
3 C56
4 C27
5 C09 FGH
SELECT A CHARACTER
NEXT
CONFIRM
OK
EXIT
MENU

**6** Press OK to confirm the new name.

**7** Press MENU to exit the menu.

**Tip**

- If you want to return to the previous menu, highlight RETURN and press OK.

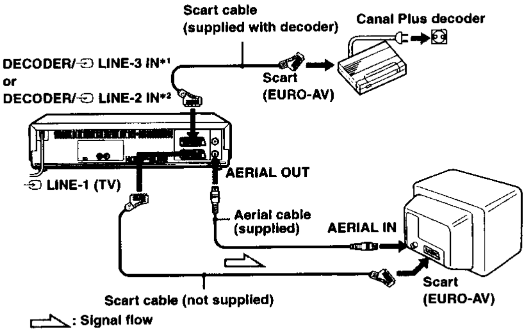
**Notes**

- The menu disappears automatically if you don't proceed for more than a few minutes.
- If you enter a symbol in step 5, it will appear as a blank space in the display window.

# Setting the Canal Plus decoder
## (not available on SLV-SE350K, SE500R, SE600N and SE700R)

You can watch or record Canal Plus programmes if you connect a decoder (not supplied) to the VCR.

### Connecting a decoder


Scart cable
(supplied with decoder)
Canal Plus decoder
DECODER/⊸ LINE-3 IN*1
or
DECODER/⊸ LINE-2 IN*2
Scart
(EURO-AV)
⊸ LINE-1 (TV)
AERIAL OUT
Aerial cable
(supplied)
AERIAL IN
Scart
(EURO-AV)
Scart cable (not supplied)
: Signal flow

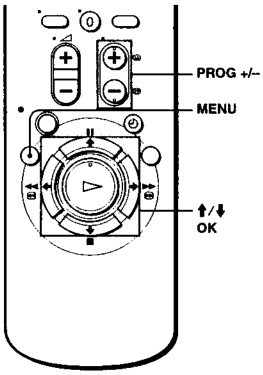
### Setting Canal Plus channels

To watch or record Canal Plus programmes, set your VCR to receive the channels using the on-screen display.

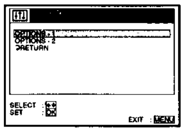
In order to set the channels correctly, be sure to follow all of the steps below.

**Before you start...**

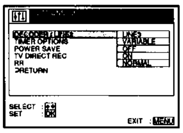
- Turn on the VCR, the TV, and the decoder.
- Set the TV to the video channel.


PROG +/–
MENU
↑/↓
OK

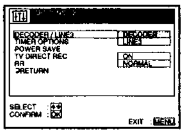
1 Press MENU, then press ↑/↓ to highlight OPTIONS and press OK.


OPTIONS - 1
OPTIONS - 2
RETURN
SELECT : ↑↓
SET : OK
EXIT : MENU

2 Press ↑/↓ to highlight OPTIONS-2, then press OK.

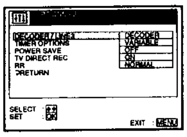

DECODER / LINE3 LINE3
TIMER OPTIONS VARIABLE
POWER SAVE OFF
TV DIRECT REC ON
RR NORMAL
RETURN
SELECT : ↑↓
SET : OK
EXIT : MENU

3 Press ↑/↓ to highlight DECODER/LINE3*1 (or DECODER/LINE2*2), then press OK.


DECODER / LINE3 DECODER
TIMER OPTIONS LINE3
POWER SAVE
TV DIRECT REC ON
RR NORMAL
RETURN
SELECT : ↑↓
CONFIRM : OK
EXIT : MENU

continued

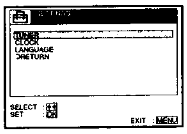
4 Press ↑/↓ to highlight DECODER, then press OK.


DECODER / LINE3 DECODER
TIMER OPTIONS VARIABLE
POWER SAVE OFF
TV DIRECT REC ON
RR NORMAL
RETURN
SELECT : ↑↓
SET : OK
EXIT : MENU

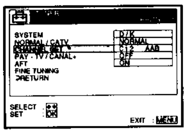
5 Press MENU to exit the menu.

The menu disappears from the TV screen.

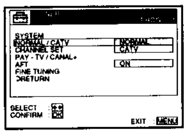
6 Press MENU again. Then press ↑/↓ to highlight SETTINGS and press OK.


TUNER
CLOCK
LANGUAGE
RETURN
SELECT : ↑↓
SET : OK
EXIT : MENU

7 Press ↑/↓ to highlight TUNER, then press OK.

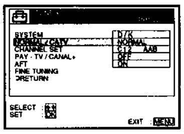

SYSTEM D/K
NORMAL / CATV NORMAL
CHANNEL SET C12 AAB
PAY - TV / CANAL+ OFF
AFT ON
FINE TUNING
RETURN
SELECT : ↑↓
SET : OK
EXIT : MENU

8 Press ↑/↓ to highlight NORMAL/CATV, then press OK.

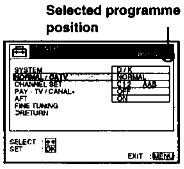

SYSTEM
NORMAL / CATV NORMAL
CHANNEL SET CATV
PAY - TV / CANAL+
AFT ON
FINE TUNING
RETURN
SELECT : ↑↓
CONFIRM : OK
EXIT : MENU

9 Press ↑/↓ to highlight NORMAL, then press OK.

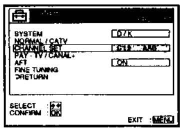
To preset CATV (Cable Television) channels, select CATV.


SYSTEM D/K
NORMAL / CATV NORMAL
CHANNEL SET C12 AAB
PAY - TV / CANAL+ OFF
AFT ON
FINE TUNING
RETURN
SELECT : ↑↓
SET : OK
EXIT : MENU

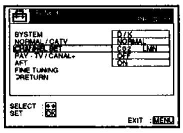
10 Press PROG +/– to select the desired programme position.


Selected programme position
SYSTEM D/K
NORMAL / CATV NORMAL
CHANNEL SET C12 AAB
PAY - TV / CANAL+ OFF
AFT ON
FINE TUNING
RETURN
SELECT : ↑↓
SET : OK
EXIT : MENU

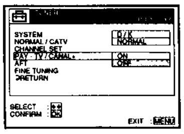
11 Press ↑/↓ to highlight CHANNEL SET, then press OK.


SYSTEM D/K
NORMAL / CATV
CHANNEL SET C12 AAB
PAY - TV / CANAL+
AFT ON
FINE TUNING
RETURN
SELECT : ↑↓
CONFIRM : OK
EXIT : MENU

12 Press ↑/↓ to select the Canal Plus channels, then press OK.


SYSTEM D/K
NORMAL / CATV NORMAL
CHANNEL SET C02 LNN
PAY - TV / CANAL+ OFF
AFT ON
FINE TUNING
RETURN
SELECT : ↑↓
SET : OK
EXIT : MENU

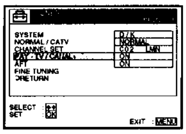
13 Press ↑/↓ to highlight PAY-TV/CANAL+, then press OK.


SYSTEM D/K
NORMAL / CATV NORMAL
CHANNEL SET
PAY - TV / CANAL+ ON
AFT OFF
FINE TUNING
RETURN
SELECT : ↑↓
CONFIRM : OK
EXIT : MENU

continued

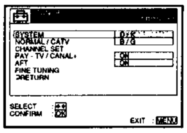
**14**

Press ⬆/⬇ to highlight ON, then press OK.



**15**

If the TV sound is distorted or noisy, press ⬆/⬇ to highlight SYSTEM and press OK. Then press ⬆/⬇ to select B/G or D/K so that you get better sound.



**16** MENU

Press MENU to exit the menu.

**Tip**

- If you want to return to the previous menu, highlight RETURN and press OK.

**Notes**

- The menu disappears automatically if you don't proceed for more than a few minutes.
- To superimpose subtitles while watching Canal Plus programmes, make both decoder-VCR and VCR-TV connections using 21-pin Scart cables that are compatible with the RGB signals. You cannot record subtitles on the VCR.
- When you watch Canal Plus programmes through the RFU input of the TV, press ⇥ TV/VIDEO so that the VIDEO indicator appears in the display window.

*[1] SLV-SE500K and SE800N/K only

*[2] SLV-SE700N/K only

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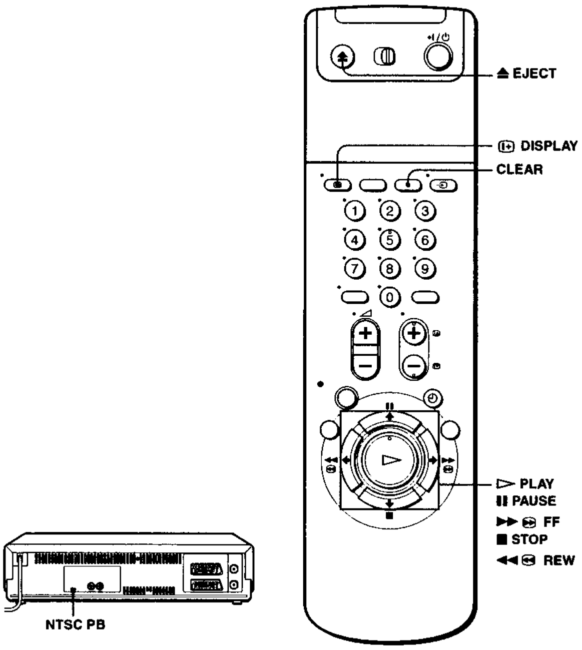
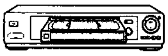
## Playing a tape



**1** Turn on your TV and set it to the video channel.

**2** Insert a tape.

The VCR turns on and starts playing automatically if you insert a tape with its safety tab removed.



continued

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**3**

Press ▷ PLAY.

When the tape reaches the end, it will rewind automatically.

**Additional tasks**

| To | Press |
|---|---|
| Stop play | ■ STOP |
| Pause play | II PAUSE |
| Resume play after pause | II PAUSE or ▷ PLAY |
| Fast-forward the tape | ▶▶ FF during stop |
| Rewind the tape | ◀◀ REW during stop |
| Eject the tape | ≜ EJECT |

**To set the colour system**

If the playback picture has no colour, or streaks appear during playback, set COLOUR SYSTEM in the OPTIONS-1 menu to conform to the system that the tape was recorded in (see page 79). (Normally set the option to AUTO.)

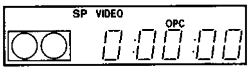
**To play an NTSC-recorded tape**

Set NTSC PB at the rear of the VCR according to the colour system of your TV.

| When your TV is | Set NTSC PB to |
|---|---|
| PAL only | ON PAL TV |
| PAL and NTSC | NTSC 4.43 |

**To use the time counter**

Press CLEAR at the point on the tape that you want to find later. The counter in the display window resets to "0:00:00." Search for the point afterwards by referring to the counter.



To display the counter on the TV screen, press DISPLAY.

---

**Notes**

- The counter resets to "0:00:00" whenever a tape is reinserted.
- The counter stops counting when it comes to a portion with no recording.
- The time counter does not appear on the TV screen when using an NTSC-recorded tape.
- Depending on your TV, the following may occur while playing an NTSC-recorded tape:
  - The picture becomes black and white.
  - The picture shakes.
  - No picture appears on the TV screen.
  - Black streaks appear horizontally on the TV screen.
  - The colour density increases or decreases.
- If you play back a tape in the LP or EP mode with the NTSC system, the sound becomes monaural.
- While setting the menu on the TV screen, buttons for playback on the remote commander do not function.
- The picture's colour may be affected when playing a MESECAM-recorded tape in the LP mode.*

* SLV-SE350K only

### Starting playback automatically with one button (One Touch Play) (not available on SLV-SE600N and SE700R)

If you use the SMARTLINK connection, you can turn on the VCR and the TV, set the TV to the video channel, and start playback automatically with one button.

1. Insert a tape.

   The VCR automatically turns on.

   If you insert a tape with its safety tab removed, the TV turns on and switches to the video channel. Playback starts automatically.
2. Press ▷ PLAY.

   The TV turns on and switches to the video channel automatically. Playback starts.

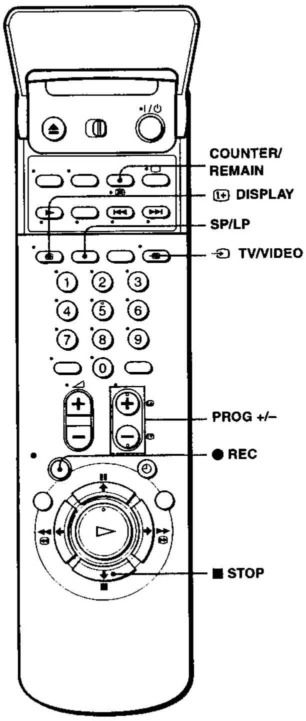
**Tip**

- When there already is a tape in the VCR, the VCR and the TV turn on, the TV is set to the video channel, and playback starts automatically in one sequence when you press ▷ PLAY.

**Note**

- When you use the One Touch Play function, leave the TV on or in the standby mode.

# Recording TV programmes



**1** Turn on your TV and set it to the video channel.

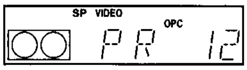
To record from a decoder, turn it on.

**2** Insert a tape with its safety tab in place.

---

**3**

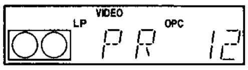
Press PROG +/– to select the programme position or station name*¹ you want to record.



**4**

Press SP/LP to select the tape speed, SP or LP.

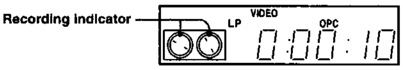
LP (Long Play) provides recording time twice as long as SP. However, SP (Standard Play) produces better picture and audio quality.



**5**

Press ● REC to start recording.

The recording indicator lights up red in the display window.

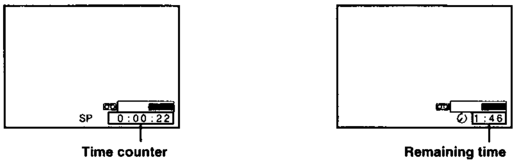


### To stop recording

Press ■ STOP.

### To check the remaining time

Press DISPLAY. With the display on, press COUNTER/REMAIN to check the remaining time. Each time you press COUNTER/REMAIN, the time counter and the remaining time appear alternately. The indicator indicates the remaining time.



In order to get an accurate remaining time indication, be sure TAPE LENGTH in the OPTIONS-1 menu is set according to the tape type you use (see page 79).

### To watch another TV programme while recording

**1** Press TV/VIDEO to turn off the VIDEO indicator in the display window.

**2** Select another programme position on the TV.

continued

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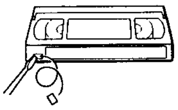
### To save a recording

To prevent accidental erasure, break off the safety tab as illustrated. To record on the same tape again, cover the tab hole with adhesive tape.



Safety tab

**Tips**

- To select a programme position, you can use the programme number buttons on the remote commander. For two-digit numbers, press the -/- - (ten's digit) button followed by the programme number buttons.
- If you connect additional equipment to a LINE connector or jack, you can select the input signal using the INPUT SELECT or PROG +/– buttons.
- The DISPLAY information appears on the TV screen indicating information about the tape, but the information won't be recorded on the tape.
- If you don't want to watch TV while recording, you can turn off the TV. When using a decoder, make sure to leave it on.

**Notes**

- The DISPLAY information does not appear during still (pause) mode or slow-motion playback.
- The DISPLAY information will not appear while playing an NTSC-recorded tape.
- If a tape has portions recorded in both PAL (MESECAM) and NTSC systems, the time counter reading will not be correct. This discrepancy is due to the difference between the counting cycles of the two video systems.
- You cannot watch a Canal Plus programme while recording another Canal Plus programme.*²
- When you insert a non-standard commercially available tape, the remaining time may not be correct.
- The remaining time is intended for rough measurement only.
- About 30 seconds after the tape begins playback, the tape remaining time will be displayed.
- The station name*¹ may not appear if the VCR does not receive station name information signals.

*¹ not available on SLV-SE500R, SE600N and SE700R

*² not available on SLV-SE350K, SE500R, SE600N and SE700R

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## Recording what you are watching on the TV (TV Direct Rec)
## (not available on SLV-SE600N and SE700R)

If you use the SMARTLINK connection, you can easily record what you are watching on the TV (other than tapes being played on the VCR).

**1** Insert a tape with its safety tab in place.

**2** Press ● REC while you are watching a TV programme or external source.

The VCR automatically turns on, then the TV indicator lights up and the VCR starts recording what you are watching on the TV.

**Tips**

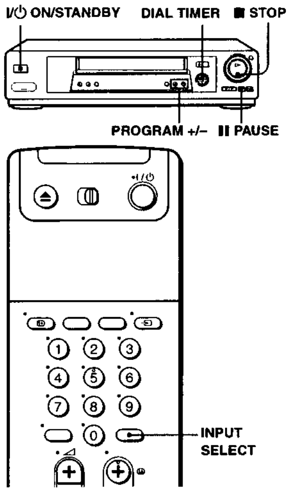
- The TV indicator appears in the display window after you press ● REC in some situations such as:
  - when you are watching a source connected to the TV's line input, or
  - when the TV tuner preset data for the programme position is different from the data in the VCR tuner preset.
- If there is a tape with its safety tab in place in the VCR, the VCR automatically turns on and starts recording what you are watching on the TV when you press ● REC.
- You can turn the TV Direct Rec function ON and OFF in the OPTIONS-2 menu (see page 79).

**Notes**

- You cannot record what you are watching using this method when the VCR is in the following modes; pause, timer standby, tuner preset, Auto Set Up, and recording.
- When the TV indicator is lit in the display window, do not turn off the TV nor change the TV programme position. When the TV indicator is not lit, the VCR continues recording the programme even if you change the TV programme position on the TV.

# Recording TV programmes using the Dial Timer
## (SLV-SE800N/K only)

The Dial Timer function allows you to make timer recordings of programmes without turning on your TV. Set the recording timer to record up to eight programmes, including settings made with other timer methods, that will be broadcast within the next month. The recording start time and recording stop time can be set at one minute intervals.



**Before you start...**

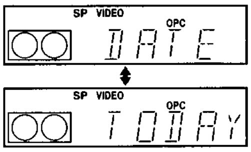
- Insert a tape with its safety tab in place. Make sure the tape is longer than the total recording time.
- To record from a decoder, turn it on.

**1**

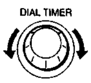
Press DIAL TIMER.

"DATE" and "TODAY" appear alternately in the display window.

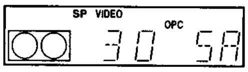
If the date and time are not set, "DAY" will appear. See step 2 in the following section, "To set the clock" to set the date and time.



**2**



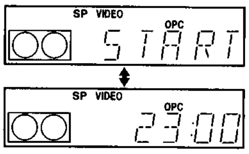
Turn DIAL TIMER to set the recording date.



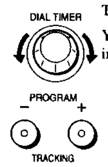
**3**

Press DIAL TIMER.

"START" and the current time appear alternately in the display window.

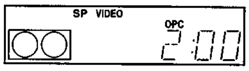


**4**



Turn DIAL TIMER to set the recording start time.

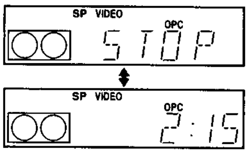
You can set the recording start time in 15 minute intervals or adjust the time in one minute intervals by pressing the PROGRAM +/– buttons.



**5**

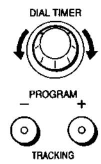
Press DIAL TIMER.

"STOP" and the recording stop time appear alternately in the display window.



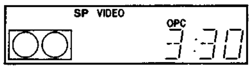
continued

**6**



Turn DIAL TIMER to set the recording stop time.

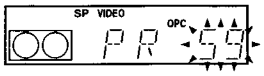
You can set the recording stop time in 15 minute intervals or adjust the time in one minute intervals by pressing the PROGRAM +/– buttons.



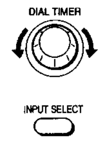
**7**

Press DIAL TIMER.

The programme position or station name appears in the display window.

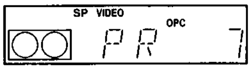


**8**



Turn DIAL TIMER to set the programme position.

To record from a decoder or other source connected to one or more of the LINE inputs, turn DIAL TIMER or press INPUT SELECT to display the connected line in the display window.



**9**

Press DIAL TIMER to complete the setting.

"OK" appears in the display window for about five seconds.

The ⊕ indicator appears in the display window and the VCR stands by for recording.

To record from a decoder or other source, leave the connected equipment turned on.

### To return to the previous step

To return to the previous step, press the PROGRAM + and – buttons on the VCR at the same time during any of the dial timer settings.

### To stop recording

To stop the VCR while recording, press ■ STOP.

### To use the VCR after setting the timer

To use the VCR before a recording begins, just press I/⏻. The ⊕ indicator turns off and the VCR turns on. Remember to press I/⏻ to reset the VCR to recording standby after using the VCR.

You can also do the following tasks while the VCR is recording:

- Reset the counter (page 42).
- Display tape information on the TV screen (page 45).
- Check the timer settings (page 68).
- Watch another TV programme (page 45).

### To set the clock

1. Turn DIAL TIMER so that "CLOCK" appears in the display window.
2. Press DIAL TIMER.
   "DAY" appears in the display window.
3. Turn DIAL TIMER to set the day.
4. Press DIAL TIMER.
   "MONTH" appears in the display window.
5. Turn and press DIAL TIMER to set the month, and then the year. After you set the year, "CLOCK" appears in the display window again.
6. Turn and press DIAL TIMER to set the hour and minute.
7. When you have finished setting the time, press DIAL TIMER to start the clock.

**Tips**

- To cancel a Dial Timer setting, press ■ STOP on the VCR while you are making the setting.
- The programme is recorded in the current tape speed mode. To change the tape speed, press SP/LP before you complete the setting in step 9.
- When you are recording a programme in the SP mode and the remaining tape becomes shorter than the recording time, the tape speed is automatically changed to the LP mode. Note that some interference will appear on the picture at the point the tape speed is changed. If you want to keep the tape speed, set AUTO LONG PLAY to OFF in the OPTIONS-1 menu (page 79).
- To check, change, or cancel the programme setting, see "Checking/changing/cancelling timer settings" (page 68).

**Notes**

- If eight programmes have already been set using the ShowView system or the TIMER menu, "FULL" appears in the display window for about five seconds.
- The ⊕ indicator flashes in the display window when you complete the setting in step 9 with no tape inserted.
- If you set the clock using the Auto Clock Set function and AUTO ADJUST is set to ON, the clock will adjust itself to the incoming time signal regardless of adjustments made with the Dial Timer. Be sure you have set ACS correctly.
- The station name may not appear if the VCR does not receive station name information signals.

continued

### About the Demonstration Mode

The DIAL TIMER function has a Demonstration Mode that allows the user, such as a salesperson, to enter more than eight examples of timer settings when demonstrating the use of the DIAL TIMER. It cancels the "FULL" notice which appears if eight programmes have already been set. Do not use the Demonstration Mode for making timer recordings. Doing so may cause the settings to be inaccurate.

**To activate the Demonstration Mode**

Press ❚❚ (pause) on the VCR while turning the DIAL TIMER. "DEMO" appears in the display window for a few seconds.

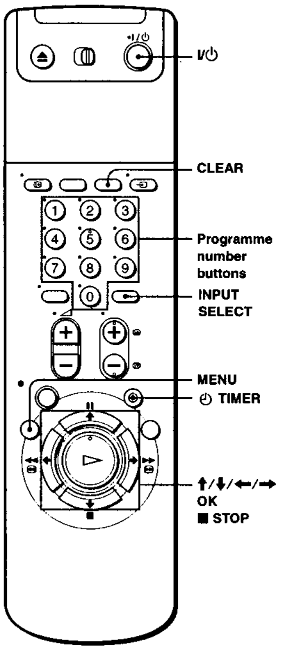
**To cancel the Demonstration Mode**

Turn the power off and unplug the mains lead. Although the Demonstration Mode is cancelled, the timer settings entered while using the Demonstration Mode will remain. Be sure to manually cancel the timer settings before you use the Dial Timer or any other timer method after reconnecting the mains lead (see page 68).

## Recording TV programmes using the ShowView system

## (not available on SLV-SE500R, SE600N and SE700R)

The ShowView system is the feature that simplifies programming the VCR to make timer recordings. Just enter the ShowView number listed in the TV programme guide. The date, times, and programme position of that programme are set automatically. You can preset a total of eight programmes, including settings made with other timer methods.

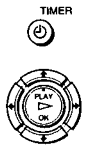


**Before you start…**

- Check that the VCR clock is set to the correct time and date.
- Insert a tape with its safety tab in place. Make sure the tape is longer than the total recording time.
- To record from a decoder, turn it on.
- Turn on your TV and set it to the video channel.
- Set TIMER OPTIONS to SHOWVIEW or VARIABLE in the OPTIONS-2 menu (see page 79).

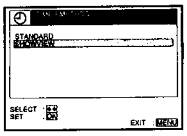
continued

**1**

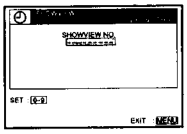


Press ⏲ TIMER.

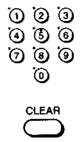
- When you set TIMER OPTIONS to VARIABLE:
  The TIMER METHOD menu appears on the TV screen. Press ↑/↓ to select SHOWVIEW, then press OK.



- When you set TIMER OPTIONS to SHOWVIEW:
  The SHOWVIEW menu appears on the TV screen.

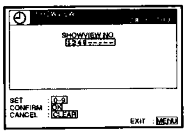


**2**

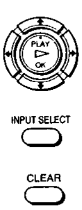


Press the programme number buttons to enter the ShowView number.

If you make a mistake, press CLEAR and re-enter the correct number.

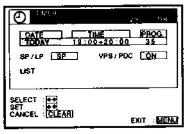


**3**



Press OK.

The date, start and stop times, programme position or station name, tape speed, and VPS/PDC setting appear on the TV screen.



- If "– –" appears in the "PROG." (programme) column (this may happen for local broadcasts), you have to set the appropriate programme position manually.
  Press ↑/↓ to select the desired programme position.
  To record from a decoder or other source connected to one or more of the LINE inputs, press INPUT SELECT to display the connected line in the "PROG." position.
  You will only have to do this operation once for the referred channel. The VCR will then store your setting.

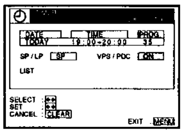
If the information is incorrect, press CLEAR to cancel the setting.

**4**

If you want to change the date, tape speed, and the VPS/PDC setting:

1 Press ←/→ to highlight the item you want to change.

2 Press ↑/↓ to reset it.



- To record the same programme every day or the same day every week, see "Daily/weekly recording" below.
- To use the VPS/PDC function, set VPS/PDC to ON.
  For details of the VPS/PDC function, see "Timer recording with VPS/PDC signals" below.

**5**

Press MENU to exit the menu.

**6**

Press I/⏻ to turn off the VCR.

The ⏲ indicator appears in the display window and the VCR stands by for recording.

To record from a decoder or other source, leave the connected equipment turned on.

**To stop recording**

To stop the VCR while recording, press ■ STOP.

**Daily/weekly recording**

In step 4 above, press ↓ to select the recording pattern. Each time you press ↓, the indication changes as shown below. Press ↑ to change the indication in reverse order.

**TODAY → SUN-SAT (Sunday to Saturday) → MON-SAT (Monday to Saturday) → MON-FRI (Monday to Friday) → SAT (every Saturday) ..... → MON (every Monday) → SUN (every Sunday) → 1 month later → (dates count down) → TOMORROW → TODAY**

**Timer recording with VPS/PDC signals**

Some broadcast systems transmit VPS (Video Programme System) or PDC (Programme Delivery Control) signals with their TV programmes. These signals ensure that your timer recordings are made regardless of broadcast delays, early starts, or broadcast interruptions (when the VPS or PDC indicator in the display window is lit).

To use the VPS/PDC function, set VPS/PDC to ON in step 4 above. You can also use the VPS/PDC function for a source connected to one or more of the LINE inputs.

continued

**To record satellite broadcasts**

If you connect a satellite tuner and the VCR, you can record satellite programmes.

1 Turn on the satellite tuner.

2 On the satellite tuner, select the satellite programme for which you want to make a timer setting.

3 Follow steps 1 through 6 above.

4 Keep the satellite tuner turned on until the VCR finishes recording the satellite programme for which you have made a timer setting.

**To use the VCR after setting the timer**

To use the VCR before a recording begins, just press I/⏻. The ⏲ indicator turns off and the VCR switches on. Remember to press I/⏻ to reset the VCR to recording standby after using the VCR.

You can also do the following tasks while the VCR is recording:

- Reset the counter (page 42).
- Display tape information on the TV screen (page 45).
- Check the timer settings (page 68).
- Watch another TV programme (page 45).

**Tips**

- To set the programme position, you can also use the PROG +/– or programme number buttons.
- To set the programme position with a two digit number, press –/– – (ten's digit) button followed by the programme number buttons.
- To set the line input video source, you can also use the PROG +/– buttons.
- To set the tape speed, you can also use the SP/LP button.
- When you are recording a programme in the SP mode and the remaining tape becomes shorter than the recording time, the tape speed is automatically changed to the LP mode. Note that some interference will appear on the picture at the point the tape speed is changed. If you want to keep the same tape speed, set AUTO LONG PLAY to OFF in the OPTIONS-1 menu (page 79).
- To check, change, or cancel the programme setting, press ←/→ to choose LIST, then press OK in step 4. For details, see step 3 in "Checking/changing/cancelling timer settings" (page 68).

**Notes**

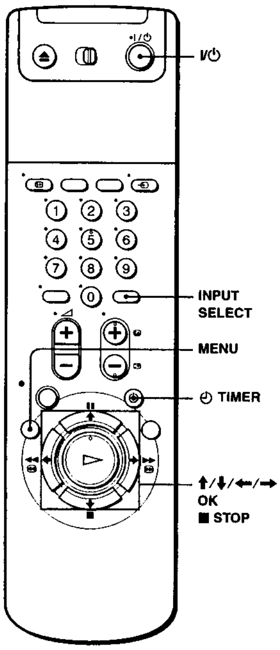
- If the VPS/PDC signal is too weak or the broadcasting station failed to transmit VPS/PDC signals, the VCR will start recording at the set time without using the VPS/PDC function.
- The ⏲ indicator flashes in the display window when you press I/⏻ with no tape inserted.
- When you set TIMER OPTIONS to STANDARD in the OPTIONS-2 menu, the SHOWVIEW menu does not appear on the TV screen. Select SHOWVIEW or VARIABLE.
- The VPS/PDC function is automatically set to OFF for the timer recording of a satellite programme.
- The station name may not appear if the VCR does not receive station name information signals.

# Recording TV programmes using the timer

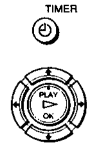
You can preset a total of eight programmes, including settings made with other timer methods.

**Before you start...**

- Check that the VCR clock is set to the correct time and date.
- Insert a tape with its safety tab in place. Make sure the tape is longer than the total recording time.
- To record from a decoder, turn it on.
- Turn on your TV and set it to the video channel.
- Set TIMER OPTIONS* to STANDARD or VARIABLE in the OPTIONS-2 menu (see page 79).

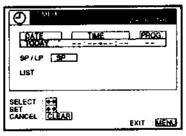


continued



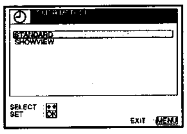
**1** Press ⏲ TIMER.

For SLV-SE500R, SE600N and SE700R:
The TIMER menu appears on the TV screen.

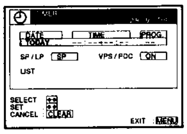


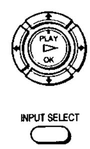
For SLV-SE350K, SE500K, SE700N/K and SE800N/K:

- When you set TIMER OPTIONS to VARIABLE:
  The TIMER METHOD menu appears on the TV screen. Press ↑/↓ to select STANDARD, then press OK.



- When you set TIMER OPTIONS to STANDARD:
  The TIMER menu appears on the TV screen.

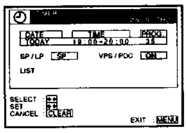




**2** Set the date, start and stop times, programme position or station name*, tape speed, and VPS/PDC function*:

1 Press → to highlight each item in turn.

2 Press ↑/↓ to set each item.



To correct a setting, press ← to return to that setting and reset.

- To record the same programme every day or the same day every week, see "Daily/weekly recording" on page 59.
- To use the VPS/PDC function*, set VPS/PDC to ON. For details about the VPS/PDC function, see "Timer recording with VPS/PDC signals" on page 55.
- To record from a decoder or other source connected to one or more of the LINE inputs, press INPUT SELECT to display the connected line in the "PROG." position.

**3** Press MENU to exit the menu.

**4** Press I/⏻ to turn off the VCR.

The ⏲ indicator appears in the display window and the VCR stands by for recording.

To record from a decoder or other source, leave the connected equipment turned on.

**To stop recording**

To stop the VCR while recording, press ■ STOP.

**Daily/weekly recording**

In step 2 above, press ↓ to select the recording pattern. Each time you press ↓, the indication changes as shown below. Press ↑ to change the indication in reverse order.
**TODAY → SUN-SAT (Sunday to Saturday) → MON-SAT (Monday to Saturday) → MON-FRI (Monday to Friday) → SAT (every Saturday) ..... → MON (every Monday) → SUN (every Sunday) → 1 month later → (dates count down) → TOMORROW → TODAY**

**To record satellite broadcasts**

If you connect a satellite tuner and the VCR, you can record satellite programmes.

1 Turn on the satellite tuner.

2 On the satellite tuner, select the satellite programme for which you want to make a timer setting.

3 Follow steps 1 through 4 above.

4 Keep the satellite tuner turned on until the VCR finishes recording the satellite programme for which you have made a timer setting.

**To use the VCR after setting the timer**

To use the VCR before a recording begins, just press I/⏻. The ⏲ indicator turns off and the VCR switches on. Remember to press I/⏻ to reset the VCR to recording standby after using the VCR.

You can also do the following tasks while the VCR is recording:

- Reset the counter (page 42).
- Display tape information on the TV screen (page 45).
- Check the timer settings (page 68).
- Watch another TV programme (page 45).

continued

**Tips**

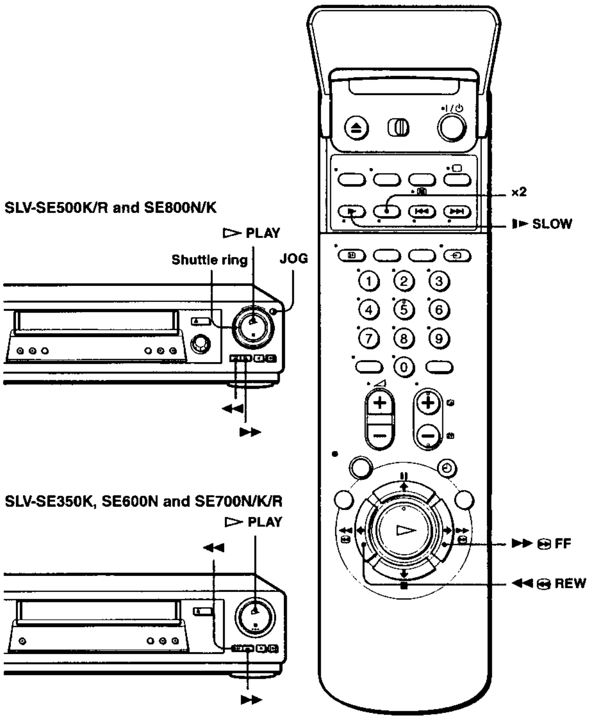
- To set the programme position, you can also use the PROG +/– or programme number buttons.
- To set the programme position with a two digit number, press -/-- (ten's digit) button followed by the programme number buttons.
- To set the line input video source, you can also use the PROG +/– buttons.
- To set the tape speed, you can also use the SP/LP button.
- When you are recording a programme in the SP mode and the remaining tape becomes shorter than the recording time, the tape speed is automatically changed to the LP mode. Note that some interference will appear on the picture at the point the tape speed is changed. If you want to keep the same tape speed, set AUTO LONG PLAY to OFF in the OPTIONS-1 menu (page 79).
- Even if you set TIMER OPTIONS to SHOWVIEW* in the OPTIONS-2 menu, you can set the timer manually. Press MENU to select TIMER, then go to step 2.
- To check, change, or cancel the programme setting, press ⬅/➡ to choose LIST, then press OK in step 2. For details, see step 3 in "Checking/changing/cancelling timer settings" (page 68).

**Notes**

- When setting the timer with VPS/PDC signals, enter the start and stop times exactly as indicated in the TV programme guide. Otherwise, the VPS/PDC function* won't work.
- If the VPS/PDC signal is too weak or the broadcasting station failed to transmit VPS/PDC signals, the VCR will start recording at the set time without using the VPS/PDC function*.
- The ⏻ indicator flashes in the display window when you press I/⏻ with no tape inserted.
- The VPS/PDC function* is automatically set to OFF for the timer recording of a satellite programme.
- The station name* may not appear if the VCR does not receive station name information signals.

* not available on SLV-SE500R, SE600N and SE700R

# Playing/searching at various speeds



| Playback options | Operation |
|---|---|
| View the picture during fast-forward or rewind | During fast-forward, hold down ▶▶ ⊛ FF/▶▶. During rewind, hold down ◀◀ ⊛ REW/◀◀. |

continued

| Playback options | Operation |
|---|---|
| Play at high speed | • During playback, press ▶▶ ⊛ FF or ◀◀ ⊛ REW on the remote commander.<br>• During playback, hold down ▶▶ ⊛ FF/▶▶ or ◀◀ ⊛ REW/◀◀. When you release the button, normal playback resumes. |
| Play at twice the normal speed | During playback, press ×2. |
| Play in slow motion | During playback, press ▮▶ SLOW. |
| Play frame by frame | During pause, press ▶▶ ⊛ FF or ◀◀ ⊛ REW on the remote commander. Hold down ▶▶ ⊛ FF or ◀◀ ⊛ REW to play one frame each second. |
| Rewind and start play | During stop, press ▷ PLAY on the VCR while holding down ◀◀ on the VCR. |

### To resume normal playback

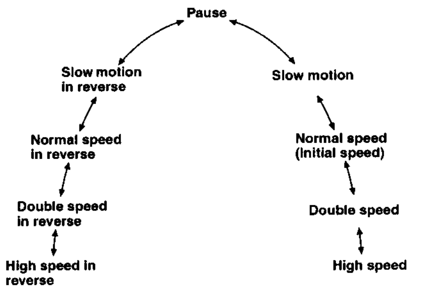
Press ▷ PLAY.

## Using the shuttle ring (SLV-SE500K/R and SE800N/K only)

With the shuttle ring, you can operate a variety of playback options. There are two ways for using the shuttle ring, normal mode and jog mode.

### To use the shuttle ring in normal mode

During playback or pause, turn the shuttle ring clockwise or anticlockwise. Each change in the shuttle ring position changes the playback mode in the following way.



### To use the shuttle ring in jog mode

Use this mode for frame-by-frame playback.

Press JOG to enter the jog mode. The JOG button lights up. If you change to the jog mode during any playback mode, playback pauses so you can see a still picture. Each change in the shuttle ring position shifts the picture one frame. To shift frames in reverse, turn the shuttle ring anticlockwise. The frame shift speed depends on the speed you turn the shuttle ring.

To resume normal mode, press JOG again. The JOG button turns off.

**Tip**

- Adjust the picture using the TRACKING +/– buttons if:
  - Streaks appear while playing in slow motion.
  - Bands appear at the top or bottom while pausing.
  - The picture shakes while pausing.

  To set tracking to the centre position, press both buttons (+/–) at the same time.

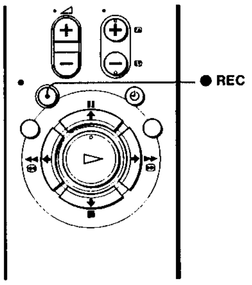
**Notes**

- The sound is muted during these operations.
- In the LP mode, noise may appear or there may be no colour.
- If the playback mode mark doesn't appear on the TV screen, press ⊞ DISPLAY.
- The picture may show noise when playing at high speed in reverse.*

* SLV-SE350K only

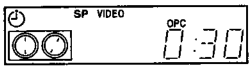
# Setting the recording duration time

After you have started recording in the normal way, you can have the VCR stop recording automatically after a specified duration.



**1** While recording, press ● REC.

The ⏲ indicator appears in the display window.



**2** Press ● REC repeatedly to set the duration time.

Each press advances the time in increments of 30 minutes.

→ 0:30 → 1:00 ----→ 5:30 → 6:00 → Normal recording

The tape counter decreases minute by minute to 0:00, then the VCR stops recording and turns off automatically.

**To extend the duration**

Press ● REC repeatedly to set a new duration time.

**To cancel the duration**

Press ● REC repeatedly until the ⏲ indicator disappears and the VCR returns to the normal recording mode.

**To stop recording**

To stop the VCR while recording, press ■ STOP.

**Note**

- You cannot display the current tape time in the display window when setting the recording duration time.

# Synchronized Recording

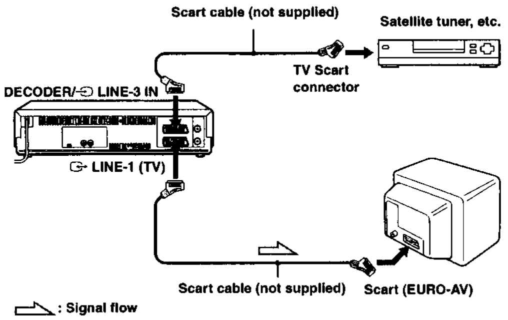
## (SLV-SE500K and SE800N/K only)

You can set the VCR to automatically record programmes from equipment such as a satellite tuner by connecting the equipment to the DECODER/LINE-3 IN connector. The connected equipment must have a timer function for this feature to work.

When the connected equipment turns on, the VCR also automatically turns on and starts recording a programme from DECODER/LINE-3 IN.

### How to connect for Synchronized Recording

Connect the DECODER/LINE-3 IN connector of the VCR to the TV Scart connector of the satellite tuner. Then connect the LINE-1 (TV) connector to the TV.

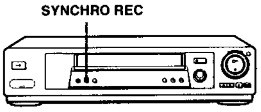


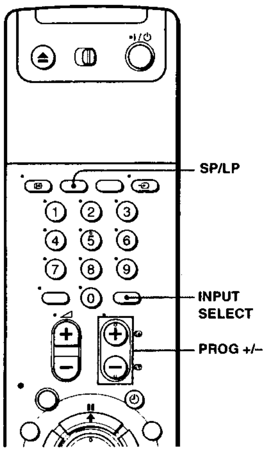
continued

### Recording programmes using the Synchronized Recording function

**Before you start...**

- Insert a tape with its safety tab in place. Make sure the tape is longer than the total recording time.
- Set DECODER/LINE3 to LINE3 in the OPTIONS-2 menu (see page 79).





**1** Press INPUT SELECT or PROG +/– to display "L3" in the display window.

**2** Set the timer on the connected equipment to the time of the programme you want to record, then turn it off.

**3** Press SP/LP to select the tape speed.

**4** Hold down SYNCHRO REC for more than two seconds.

The SYNCHRO REC button lights up and the VCR stands by for recording.

The VCR automatically turns on and starts recording when it receives an input signal from the connected equipment.

The VCR automatically stops recording when the tape reaches the end or when the connected equipment stops transmitting an input signal.

**To cancel the Synchronized Recording function**

Press SYNCHRO REC. The SYNCHRO REC button turns off.

**To stop recording**

Press ■ STOP while recording.

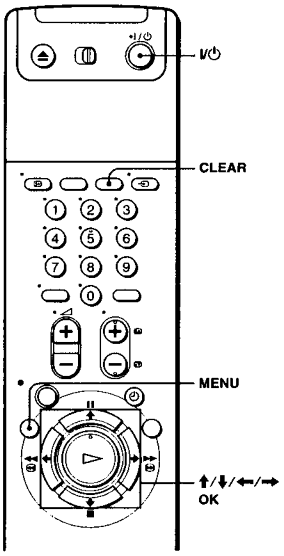
**Notes**

- This function may not work with some types of satellite tuners.
- Some TVs or other equipment with timer functions will automatically turn off if no operation is performed within a certain amount of time. In this case, the Synchronized Recording also stops automatically.
- When the connected equipment turns on while the SYNCHRO REC button is lit, recording starts automatically.
- If the settings for timer recording and Synchronized Recording overlap, the programme that starts first has priority and the second programme starts recording only after the first programme has finished.
- The Auto Clock Set function does not work while the VCR stands by for Synchronized Recording.

# Checking/changing/cancelling timer settings

**Before you start…**

- Turn on your TV and set it to the video channel.

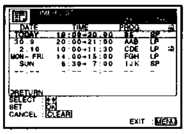


**1** Press I/⏻ to turn on the VCR.

**2** Press MENU, then press ↑/↓ to highlight LISTS and press OK.

**3** Press ↑/↓ to highlight TIMER LIST, then press OK:

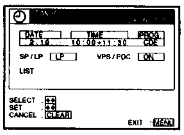
- If you want to change or cancel a setting, go on to the next step.
- If you do not need to change or cancel the settings, press MENU, then turn off the VCR to return to recording standby.



```
 DATE        TIME          PROG.
 TODAY    19:00→20:00           SP
  30.9    20:00→21:00    AAB    LP
   2.10   10:00→11:30    CDE    LP
MON-FRI   14:00→15:00    FGH    LP
   SUN     6:30→ 7:00    IJK    SP
 --.--     -:--  -:--    --     -
RETURN
SELECT : ↑↓
SET    : OK
CANCEL : CLEAR
                        EXIT : MENU
```

**4** Press ↑/↓ to select the setting you want to change or cancel, then press OK.

The selected setting appears in the TIMER menu.



```
 DATE        TIME         PROG.
  2.10   10:00→11:30      CDE
 SP/LP  LP        VPS/PDC  ON
 LIST
SELECT : ↑↓
SET    : ←→
CANCEL : CLEAR
                        EXIT : MENU
```

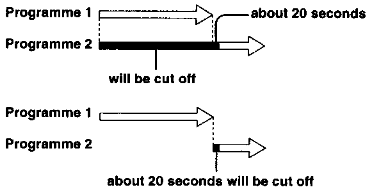
**5**
- To change the setting, press ←/→ to highlight the item you want to change, then press ↑/↓ to reset it.
- To cancel the setting, press CLEAR.

**6** Press MENU to exit the menu.

If any settings remain, turn off the VCR to return to recording standby.

### When the timer settings overlap

The programme that starts first has priority and the second programme starts recording only after the first programme has finished. If the programmes start at the same time, the programme listed first in the menu has priority.



**Tip**

- In step 6 above, you can check the TIMER LIST by selecting LIST and pressing OK. Press MENU to exit the TIMER LIST.

# Recording stereo and bilingual programmes

## (not available on SLV-SE350K, SE500K/R and SE700R)

### In ZWEITON (German stereo) system

This VCR automatically receives and records stereo and bilingual programmes based on the ZWEITON system. When a stereo or bilingual programme is received, the STEREO indicator appears in the display window.

**To select bilingual sound while recording**

Press AUDIO MONITOR to select the sound you want.

| To listen to | On-screen display | Display window |
|---|---|---|
| Main | MAIN | STEREO |
| Sub | SUB | STEREO |
| Main and sub | MAIN/SUB | STEREO |

### In NICAM system
### (SLV-SE600N, SE700N, and SE800N only)

This VCR receives and records stereo and bilingual programmes based on the NICAM system (The NICAM indicator appears). When a stereo or bilingual programme is received, the STEREO indicator appears in the display window.

To record a NICAM programme, HIFI AUDIO in the OPTIONS-1 menu should be set to NICAM (initial setting). To check the menu setting, see page 78 for details.

**To select the sound while recording**

Press AUDIO MONITOR to select the sound you want.

**Stereo programmes**

| To listen to | On-screen display | Display window |
|---|---|---|
| Stereo | STEREO | STEREO |
| Standard sound* | No indicator | No indicator |

* Usually the mixed sound of left and right channels (monaural)

**Bilingual programmes**

| To listen to | On-screen display | Display window |
|---|---|---|
| Main | MAIN | STEREO |
| Sub | SUB | STEREO |
| Main and sub | MAIN/SUB | STEREO |
| Standard sound* | No indicator | No indicator |

* Usually the main sound (monaural)

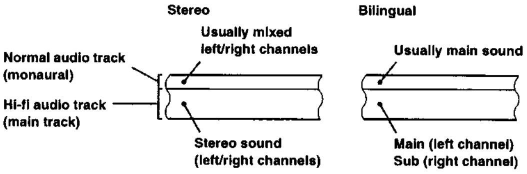
### Selecting the sound during playback

Press AUDIO MONITOR to select the sound you want.

| To listen to | On-screen display | Display window |
|---|---|---|
| Stereo/main and sub (left and right channels) | STEREO | STEREO |
| Left channel/main | LCH | STEREO |
| Right channel/sub | RCH | STEREO |
| Standard sound | No indicator | No indicator |

### How sound is recorded on a video tape

The VCR records sound onto two separate tracks. Hi-fi audio is recorded onto the main track along with the picture. Monaural sound is recorded onto the normal audio track along the edge of the tape.


Stereo
Bilingual
Usually mixed left/right channels
Usually main sound
Normal audio track (monaural)
Hi-fi audio track (main track)
Stereo sound (left/right channels)
Main (left channel)
Sub (right channel)

**Notes**

- To listen to playback sounds in stereo, you must use the Scart or AUDIO OUT connections.
- When you play a tape recorded in monaural, the sound is heard in monaural regardless of the AUDIO MONITOR setting.
- If the AUDIO MONITOR button does not function, check that AUDIO MIX in the OPTIONS-1 menu is set to OFF (see page 78).
- If HIFI AUDIO* is set to STANDARD, the standard sound will be recorded on both the hi-fi and normal audio tracks. Pressing AUDIO MONITOR will not change the sound.

* SLV-SE600N, SE700N, and SE800N only

# Searching using the Smart Search function

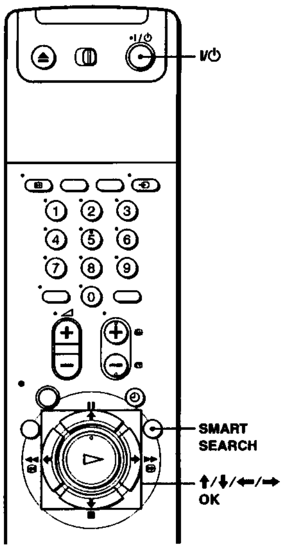
If you record multiple programmes on a tape, use the Smart Search function to see what has been recorded on your tape. You can see information such as date, time, and programme position of programmes recorded on a tape. You can also start playback directly from the selected programme using the SMART SEARCH screen.

All programmes are listed on the screen, regardless of how the programme was recorded.

The data of the last tape inserted into the VCR is automatically stored in memory. If you want to recall the latest data screen, select LATEST DATA in the SMART SEARCH screen (see page 73).

**Before you start...**

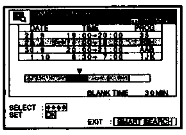
- Turn on your TV and set it to the video channel.



1 After recording, press I/⏻ to turn on the VCR.

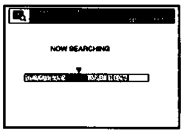
2 Press SMART SEARCH.

3 Press ↑/↓/←/→ to select the programme you want to start viewing.



4 Press OK.

The VCR starts searching, and playback starts automatically from the beginning of the selected programme.



**To stop searching**

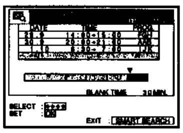
Press ■ STOP.

**To exit the SMART SEARCH screen**

Press SMART SEARCH.

**To record in a blank space**

Blank space on the tape will appear as a blank row in the SMART SEARCH screen. Select the last blank row in step 3, then press OK. The VCR rewinds/fast-forwards the tape to the beginning of the blank space, then stops. Start recording. Note that "BLANK TIME" and the remaining time indication only refers to the length of the last blank space.



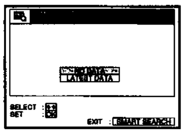
## To recall the latest data screen after you remove the tape

You can display the data of the last tape used to record a programme, even after you have removed the tape.

If you reinsert the tape and record additional programmes, be sure to select LATEST DATA. Otherwise, all of the data for the tape is deleted.

1 Reinsert the last tape that you used to record a programme.

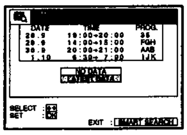
2 Press SMART SEARCH.



continued

3 Press ↑/↓ to highlight LATEST DATA.

If you want to reset the latest data screen, highlight NO DATA and press OK, then record a programme.



4 Press OK.

The latest data stored in the VCR's memory is displayed.

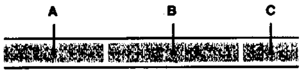
**Tips**

- You can store information for up to 24 programmes on a single list.
- While recording, you can display the SMART SEARCH screen using the SMART SEARCH button. If you decide to stop recording, press SMART SEARCH to make the SMART SEARCH screen disappear first. Then press ■ STOP.

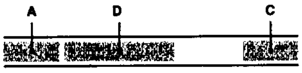
**Notes**

- You cannot use this function unless the clock is set.
- Depending on the tape, the total or remaining time may not appear correctly.
- If many short programmes are recorded on a tape, multiple programmes may be included in a single block. In this case, only the latest programme information will appear in the SMART SEARCH screen.
- Blank time is measured from the end of the last recorded programme to the end of the tape. However, if you eject the tape and then make a new recording on the same tape, the original recorded programme(s) is displayed as a blank space.
- If no information is stored in the VCR's memory, LATEST DATA does not appear in the SMART SEARCH screen.
- The station name* may not appear if the VCR does not receive station name information signals.
- If you start recording a programme "D" from the middle of a previously recorded programme "A" and into another previously recorded programme "B," the Smart Search information for the second programme "B," which is recorded over, is deleted.

**Originally recorded programmes**



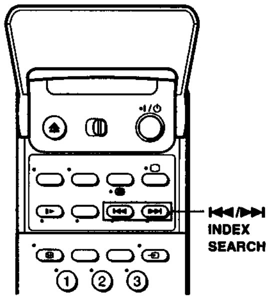
**Recording the programme "D" over the programme "A" and "B"**



* not available on SLV-SE500R, SE600N and SE700R

# Searching using the index function

The VCR automatically marks the tape with an index signal at the point where each recording begins. Use these signals as references to find a specific recording.

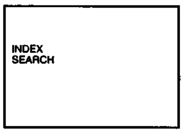


1 Insert an indexed tape into the VCR.

2 Press ⏮/⏭ INDEX SEARCH.

- To search ahead, press ⏭ INDEX SEARCH.
- To search backwards, press ⏮ INDEX SEARCH.

The VCR starts searching, and playback starts automatically from that point.



**To stop searching**

Press ■ STOP.

**Note**

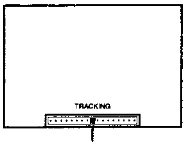
- No index signal will be added when recording starts from recording pause. However, an index signal will be marked if you change the programme position during recording pause.

# Adjusting the picture

## Adjusting the tracking

Although the VCR automatically adjusts the tracking when playing a tape (the ▧ indicator flashes in the display window, then turns off), distortion may occur if the recording is in poor condition. In this case, manually adjust the tracking.

During playback, press TRACKING +/– to display the tracking meter. The distortion should disappear as you press one of the two buttons (the ▧ indicator lights up). To resume automatic tracking adjustments, eject the tape and re-insert it.



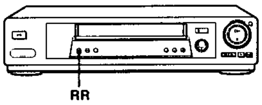
Tracking meter

## About the Reality Regenerator (RR) function (not available on SLV-SE350K and SE600N)

The Reality Regenerator (RR) function automatically restores the picture to its original quality during playback.

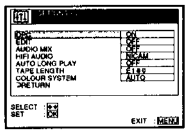
To use the RR function, press RR. The RR button lights up. You can set RR to NORMAL or HIGH in the OPTIONS-2 menu (see page 79).

To turn it off, press RR. The RR button turns off.



## About the Optimum Picture Control (OPC) function

The Optimum Picture Control (OPC) function automatically improves recording and playback quality by adjusting the VCR to the condition of the video heads and tape. To maintain better picture quality, we recommend that you set OPC to ON in the OPTIONS-1 menu (the OPC indicator lights up in the display window). For details, see page 78.



### OPC playback

The OPC function automatically works on all types of tapes, including rental tapes and tapes that were not recorded with OPC.

### OPC recording

Whenever you insert a tape and start recording for the first time, the VCR adjusts to the tape using the OPC function (the OPC indicator flashes rapidly). This adjustment is retained until the tape is ejected.

### To deactivate the OPC function

Set OPC to OFF in the OPTIONS-1 menu. The OPC indicator in the display window turns off.

### Tip

- To set tracking to the centre position, press the TRACKING + and – buttons at the same time.

### Notes

- You can adjust the tracking for an NTSC-recorded tape but the tracking meter won't be displayed.
- With the Auto Long Play function on, the OPC function will work only in SP mode. If the tape speed automatically switches from SP to LP, the OPC function turns off. If, however, the entire programme is recorded in LP mode, the OPC function will work.
- There is a delay of about ten seconds before the VCR actually starts recording while the VCR analyses the tape. To avoid the delay, first set the VCR to recording pause (the OPC indicator flashes slowly) and press ● REC to have the VCR analyse the tape (the OPC indicator flashes rapidly) and return to recording pause. After the OPC indicator stops flashing, press ❚❚ PAUSE to start recording immediately.
  If you want to start recording quickly without using the OPC function, first set the VCR to recording pause (the OPC indicator flashes slowly) and press ❚❚ PAUSE again to start recording.

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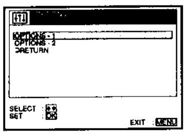
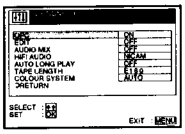
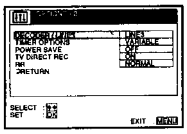
# Changing menu options

1 Press MENU, then select OPTIONS and press OK.



2 Press ↑/↓ to highlight OPTIONS-1 or OPTIONS-2, then press OK.





3 Press ↑/↓ to select the option, then press OK.

4 Press ↑/↓ to change the setting, then press OK.

5 Press MENU to return to the original screen.

### Menu choices

Initial settings are indicated in bold print.

### OPTIONS-1

| Menu option | Set this option to |
|---|---|
| OPC | • **ON** to switch on the OPC (Optimum Picture Control) function and improve picture quality.<br>• OFF to switch off OPC. |
| EDIT | • ON to minimize picture deterioration when editing.<br>• **OFF** to turn off EDIT. |
| AUDIO MIX*[1] | • ON to listen to the hi-fi and normal audio tracks at the same time. The AUDIO MONITOR button will not function.<br>• **OFF** to listen to the hi-fi and normal audio tracks separately. Select the sound using the AUDIO MONITOR button.<br>If you press ≜ EJECT or turn the VCR off, AUDIO MIX will be reset to OFF. For details, see page 71. |
| HIFI AUDIO*[2] | • **NICAM** to record NICAM broadcasts on the hi-fi audio track.<br>• STANDARD to record standard sound on the hi-fi audio track.<br>For details, see page 70. |
| AUTO LONG PLAY | • ON to change the timer recording tape speed automatically to the LP mode when the remaining tape length becomes shorter than the recording time. Note that for AUTO LONG PLAY to work correctly, the TAPE LENGTH setting must be accurate.<br>• **OFF** to keep the set tape speed. |
| TAPE LENGTH | • **E180** to use an E-180 or shorter type tape.<br>• E195 to use an E-195 type tape.<br>• E240 to use an E-240 type tape.<br>• E300 to use an E-300 type tape. |
| COLOUR SYSTEM | • **AUTO** to set the colour system automatically.<br>• PAL to play back a tape recorded in the PAL colour system.<br>• MESECAM to play back a tape recorded in the MESECAM colour system.<br>If you press ≜ EJECT or turn the VCR off, COLOUR SYSTEM will be reset to AUTO. |

### OPTIONS-2

| Menu option | Set this option to |
|---|---|
| DECODER/LINE2*[3] | • DECODER to use the DECODER/LINE-2 IN*[3] connector as the Canal Plus decoder connector.<br>• **LINE2*[3]** to use the DECODER/LINE-2 IN*[3] connector as the line input connector. |
| DECODER/LINE3*[4] | • DECODER to use the DECODER/LINE-3 IN*[4] connector as the Canal Plus decoder connector.<br>• **LINE3*[4]** to use the DECODER/LINE-3 IN*[4] connector as the line input connector. |
| TIMER OPTIONS*[5] | • **VARIABLE** to display the TIMER METHOD menu for selecting STANDARD or SHOWVIEW when pressing the ⏻ TIMER button.<br>• STANDARD to display the TIMER menu when pressing the ⏻ TIMER button.<br>• SHOWVIEW to display the SHOWVIEW menu when pressing the ⏻ TIMER button.<br>For details, see page 53 and 57. |
| POWER SAVE | • ON to turn off the indicators in the display window to conserve the VCR's power.<br>• **OFF** to turn on the indicators in the display window while the VCR is standing by. |
| TV DIRECT REC*[6] | • **ON** to activate the TV Direct Rec function.<br>• OFF to deactivate it. |
| RR*[7] | • **NORMAL** for normal everyday use.<br>• HIGH for well-used video tapes such as rented tapes. Select this option when NORMAL does not improve the picture quality. |

continued

**Notes**

- When you set a timer recording, the indicators in the display window remain on, even though POWER SAVE is set to ON.
- With the EDIT option ON, the OPC function does not work.

[*1] not available on SLV-SE350K and SE500K/R

[*2] SLV-SE600N, SE700N and SE800N only

[*3] SLV-SE700N/K only

[*4] SLV-SE500K and SE800N/K only

[*5] not available on SLV-SE500R, SE600N and SE700R

[*6] not available on SLV-SE600N and SE700R

[*7] not available on SLV-SE350K and SE600N

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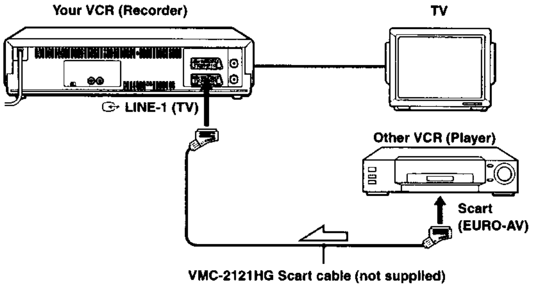
# Connecting to a VCR or stereo system

## How to connect to record on this VCR

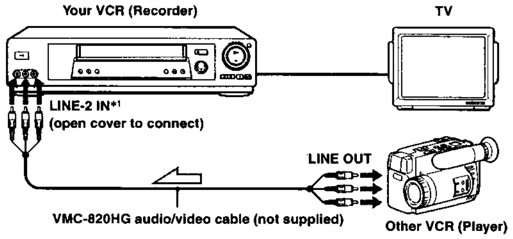
Connect the line outputs of the other VCR to the LINE IN connector or jacks of this VCR. Refer to the examples A through C and choose the connection that best suits your VCR.

**Example A**


Your VCR (Recorder)
TV
LINE-1 (TV)
Other VCR (Player)
Scart
(EURO-AV)
VMC-2121HG Scart cable (not supplied)

: Signal flow

**Example B**


Your VCR (Recorder)
TV
LINE-2 IN*1
(open cover to connect)
LINE OUT
VMC-820HG audio/video cable (not supplied)
Other VCR (Player)

: Signal flow

continued

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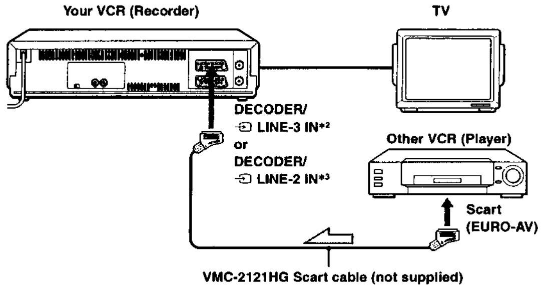
**Example C**


Your VCR (Recorder)
TV
DECODER/
LINE-3 IN*2
or
DECODER/
LINE-2 IN*3
Other VCR (Player)
Scart
(EURO-AV)
VMC-2121HG Scart cable (not supplied)

: Signal flow

## How to connect to a stereo system (SLV-SE500K/R and SE800N/K only)

Connect the LINE-2 IN AUDIO L/R jacks on this VCR to the audio output jacks on the stereo system, using the RK-C510HG audio cable (not supplied).

**Notes**

- Make sure you connect the plugs to jacks of the same colour.
- If the other VCR is a monaural type, leave the red plugs unconnected.
- If you connect this VCR to both the LINE IN and LINE OUT jacks of the other VCR, select the input correctly to prevent a humming noise.
- If the other VCR does not have a Scart (EURO-AV) connecter, use the VMC-2106HG cable instead and connect the cable to the line out jacks of the other VCR.
- When you connect another VCR to the DECODER/LINE-3 IN*2 (or DECODER/LINE-2 IN*3) connector, set DECODER/LINE3*2 (or DECODER/LINE2*3) to LINE3*2 (or LINE2*3) in the OPTIONS-2 menu.

[*1] SLV-SE500K/R and SE800N/K only (AUDIO R (right) jack is not available on SLV-SE500K/R.)

[*2] SLV-SE500K and SE800N/K only

[*3] SLV-SE700N/K only

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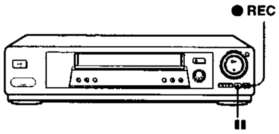
# Basic editing

## (when recording on this VCR)

### Before you start editing



- Turn on your TV and set it to the video channel.
- Press INPUT SELECT to display the connected line in the display window.
- Press SP/LP to select the tape speed, SP or LP.
- On this VCR, set EDIT to ON in the OPTIONS-1 menu. If the other VCR has a similar function, turn it on as well.

1 Insert a source tape with its safety tab removed into the other (playback) VCR. Search for the point to start playback and set it to playback pause.

2 Insert a tape with its safety tab in place into this (recording) VCR. Search for the point to start recording and press II (pause).

3 Press ● REC on this VCR to set it to recording pause.

4 To start editing, press the II (pause) buttons on both VCRs at the same time.

### To stop editing

Press the ■ STOP buttons on both VCRs.

**Tip**

- To cut out unwanted scenes while editing, press II (pause) on this VCR when an unwanted scene begins. When it ends, press II (pause) again to resume recording.

**Note**

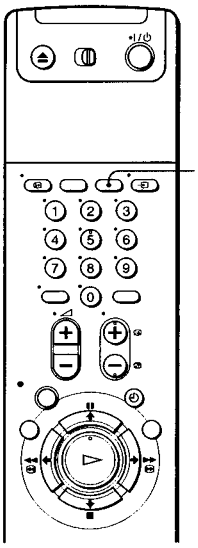
- If you start editing following the procedure above, the VCR won't start recording with the OPC function. To record a tape with the OPC function, press ● REC again during recording pause in step 3 so the VCR analyses the tape. Then, press II (pause) after the OPC indicator stops flashing to start recording. If you press II (pause) before the OPC indicator stops flashing, the OPC function is cancelled.

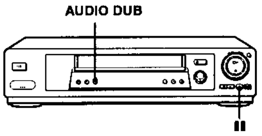
## Audio dubbing
### (SLV-SE500K/R and SE800N/K only)

This feature lets you record over the normal audio track. The monaural sound previously recorded is replaced while the original hi-fi sound remains unchanged. Use this feature to add commentary to a tape that you have recorded with a camcorder.

**Before you start...**

- Open the LINE-2 IN AUDIO L/R jacks cover on the front panel and connect a playback source.*
- Turn on the TV and set it to the video channel.





**1** Insert a source tape into your stereo system (or the playback VCR). Search for the point to start playback and set it to playback pause.

**2** Insert a prerecorded tape with its safety tab in place into this (recording) VCR. Search for the start of the section to be replaced and press ❚❚ (pause).

The VCR enters pause mode.

**3** Press AUDIO DUB.

The programme position changes to "L2," and the ⊜ indicator appears in the display window.

**4** To start editing, press the ❚❚ (pause) buttons on this VCR and the stereo system (or other VCR) at the same time.

After you use this feature, the audio in playback mode is automatically set to monaural.

**To stop editing**

Press ■ STOP on this VCR and the stereo system (or other VCR).

**To listen to both the hi-fi and normal audio (not available on SLV-SE350K and SE500K/R)**

Set AUDIO MIX to ON in the OPTIONS-1 menu (page 78). Use this feature to listen to dubbed audio over the original hi-fi audio. When AUDIO MIX is set to ON, the AUDIO MONITOR button does not function.

Remember to reset AUDIO MIX to OFF after playing the tape.

**Note**

- If you eject the tape or turn the VCR off, AUDIO MIX is automatically set to OFF.

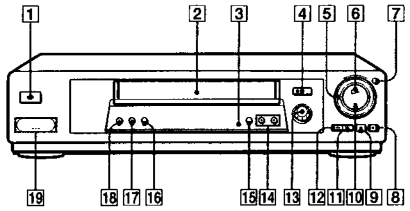
* SLV-SE500K/R does not have the AUDIO R (right) jack.

## Index to parts and controls

Refer to the pages indicated in parentheses ( ) for details.

### Front panel

**SLV-SE500K/R and SE800N/K**

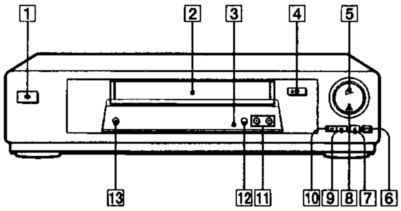


1 I/⏻ ON/STANDBY switch (14)
2 Tape compartment
3 Remote sensor (5)
4 ⏏ EJECT button (42)
5 Shuttle ring (62)
6 ▷ PLAY button (42) (62)
7 JOG button (63)
8 ● REC (record) button (45) (64) (83)
9 ❚❚ (pause) button (42) (83)
10 ■ STOP button (42) (83)
11 ▶▶ (fast-forward) button (42) (61)
12 ◀◀ (rewind) button (42) (61)
13 DIAL TIMER*1 (48)
14 PROGRAM/TRACKING +/– buttons (17) (63) (76)
15 AUTO SET UP/ RF (Radio Frequency) CHANNEL button (14) (17)
16 AUDIO DUB button (84)
17 SYNCHRO REC button*2 (66)
18 RR (Reality Regenerator) button (76)
19 LINE-2 IN VIDEO/AUDIO L (left)/R (right) jacks*3 (covered) (81) (82)

*1 not available on SLV-SE500K/R
*2 not available on SLV-SE500R
*3 AUDIO R (right) jack is not available on SLV-SE500K/R.

continued

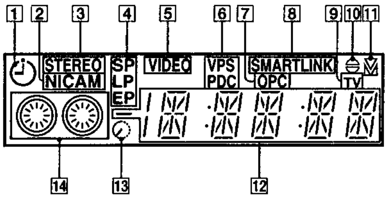
**SLV-SE350K, SE600N and SE700N/K/R**



1 I/⏻ ON/STANDBY switch/indicator (14)
2 Tape compartment
3 Remote sensor (5)
4 ⏏ EJECT button (42)
5 ▷ PLAY button (42) (62)
6 ● REC (record) button (45) (64) (83)
7 ❚❚ (pause) button (42) (83)
8 ■ STOP button (42) (83)
9 ▶▶ (fast-forward) button (42) (61)
10 ◀◀ (rewind) button (42) (61)
11 PROGRAM/TRACKING +/– buttons (17) (63) (76)
12 AUTO SET UP/ RF (Radio Frequency) CHANNEL button (14) (17)
13 RR (Reality Regenerator) button* (76)

* not available on SLV-SE350K and SE600N

## Display window



1 Timer indicator (50) (55) (59)

2 NICAM indicator*[1] (70)

3 STEREO indicator*[2] (70)

4 Tape speed indicators (45)

5 VIDEO indicator (10) (45)

6 VPS (Video Programme System)/PDC (Programme Delivery Control) indicator*[3] (55)

7 OPC (Optimum Picture Control) indicator (76)

8 SMARTLINK indicator*[4] (11)

9 TV indicator*[4] (47)

10 Audio dubbing indicator*[5] (84)

11 Tracking indicator (76)

12 Time counter/clock/line/programme position indicator (42) (45) (83)

13 Remaining time indicator (45)

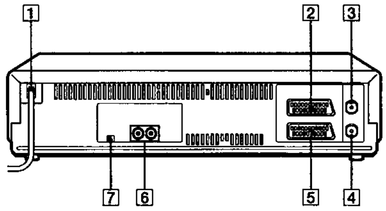
14 Tape/recording indicator (45)

*[1] SLV-SE600N, SE700N and SE800N only
*[2] not available on SLV-SE350K, and SE500K/R
*[3] not available on SLV-SE500R, SE600N and SE700R
*[4] not available on SLV-SE600N and SE700R
*[5] SLV-SE500K/R and SE800N/K only

continued

## Rear panel

### SLV-SE350K, SE500K, SE600N, SE700N/K, and SE800N



1 Mains lead (9) (10)

2 DECODER/⊒ LINE-2 IN
DECODEUR/⊒ ENTREE LIGNE-2 connector*[1] (36) (82)

DECODER/⊒ LINE-3 IN
DECODEUR/⊒ ENTREE LIGNE-3 connector*[2] (12) (36) (65) (82)

3 AERIAL IN
ANTENNE ENTREE connector (9) (10)

4 AERIAL OUT
ANTENNE SORTIE connector (9) (10)

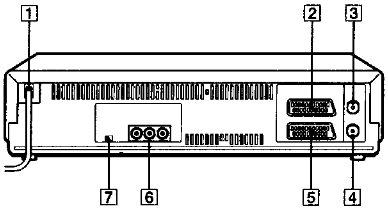
5 ⊖ LINE-1 (TV)
⊖ LIGNE-1 (TV) connector (10) (36)

6 AUDIO OUT R (right)/L (left)
SORTIE AUDIO D/G jacks*[3] (12)

7 NTSC PB (Play Back) switch (42)

*[1] SLV-SE700N/K only
*[2] SLV-SE500K and SE800N only
*[3] SLV-SE700N/K and SE800N only

### SLV-SE500R, SE700R and SE800K



1 Mains lead (9) (10)

2 DECODER/⊒ LINE-3 IN
DECODEUR/⊒ ENTREE LIGNE-3 connector*[1] (12) (36) (65) (82)

3 AERIAL IN
ANTENNE ENTREE connector (9) (10)

4 AERIAL OUT
ANTENNE SORTIE connector (9) (10)

5 ⊖ LINE-1 (TV)
⊖ LIGNE-1 (TV) connector (10) (36)

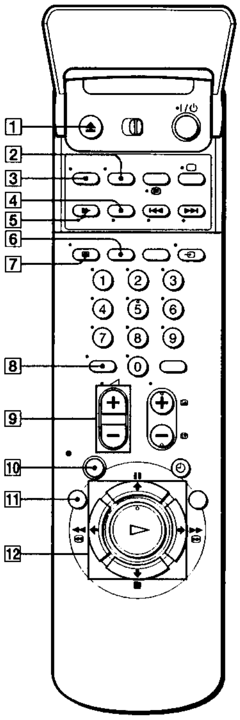
6 AUDIO OUT R (right)/L (left)/VIDEO jacks*[2] (12)

7 NTSC PB (Play Back) switch (42)

*[1] SLV-SE800K only
*[2] AUDIO R (right) jack is not available on SLV-SE500R.

continued

## Remote commander



1 ≜ EJECT button (42)

2 WIDE button (*for TV*) (7)

3 AUDIO MONITOR button (70)

4 ×2 button*[1] (62)

5 ▮► SLOW button*[1] (62)

6 SP (Standard Play)/LP (Long Play) button (45)

7 ⊕ DISPLAY button (45)

8 -/-- (ten's digit) button (6) (46)

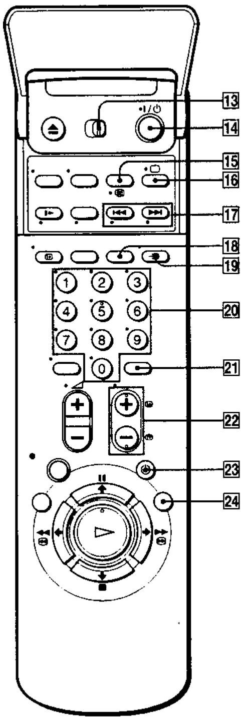
9 ◺ (volume) +/– buttons (*for TV*) (7)

10 ● REC (record) button (45) (64)

11 MENU button (19) (68)

12 ❚❚ PAUSE/⬆ button (19) (42)
■ STOP/⬇ button (19) (42)
◀◀ ⊖ REW (rewind)/⬅ button (42) (61)
▶▶ ⊖ FF (fast-forward)/➡ button (42) (61)
▷ PLAY/OK button (19) (42)

*[1] FASTEXT buttons (*for TV*) (not available on SLV-SE350K and SE600N)



13 TV / VIDEO remote control switch (5)

14 I/⏻ (on/standby) switch (6) (55)

15 COUNTER/REMAIN button (45)

⊜ (Teletext) button*2 (*for TV*) (7)

16 ▢ TV power on/TV mode select button*2 (*for TV*) (6)

17 ⏮/⏭ INDEX SEARCH buttons*1 (75)

18 CLEAR button (42) (54) (69)

19 ⇥ TV/VIDEO button (6) (10) (45)

20 Programme number buttons (6) (46)

21 INPUT SELECT button (46) (58) (83)

22 PROG (programme) +/– buttons (6) (27) (45)

▲/▼ Teletext page access buttons*2 (*for TV*) (7)

23 ⏲ TIMER button (54) (58)

24 SMART SEARCH button (72)

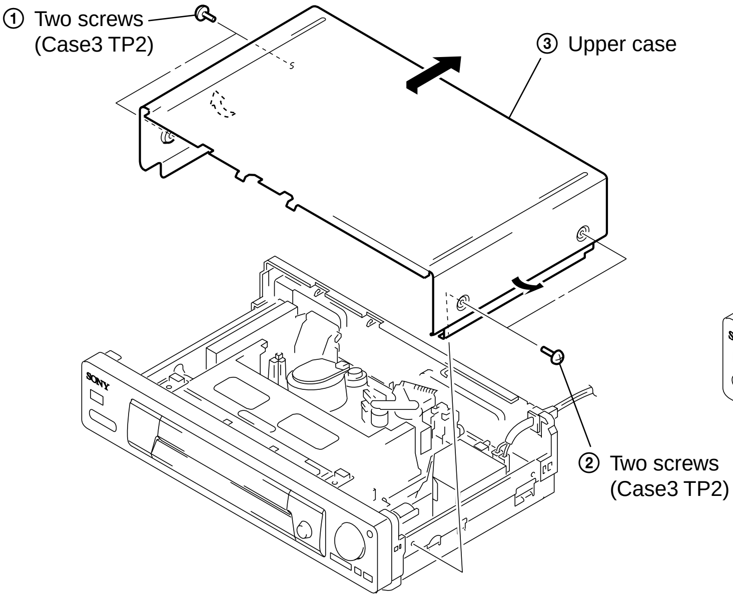
[1] FASTEXT buttons (*for TV*) (not available on SLV-SE350K and SE600N)

[2] not available on SLV-SE350K and SE600N

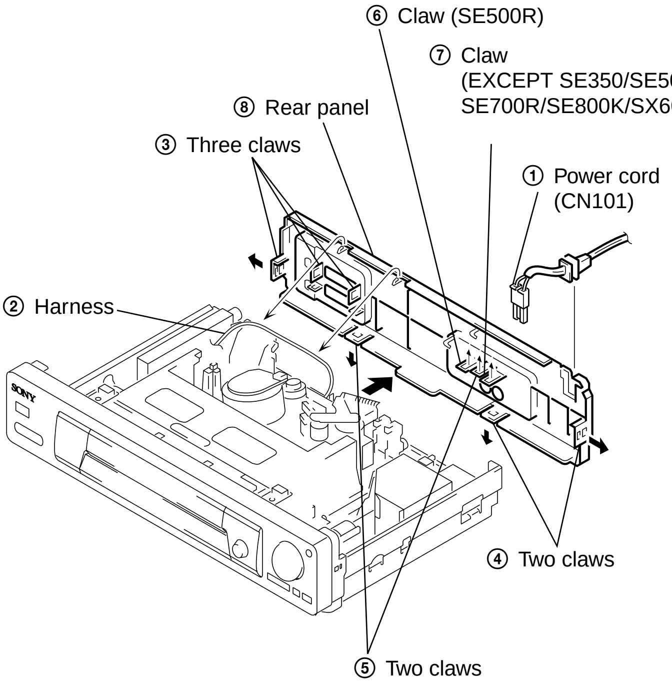
# SECTION 2
# DISASSEMBLY

**Note:** Follow the disassembly procedure in the numerical order given.

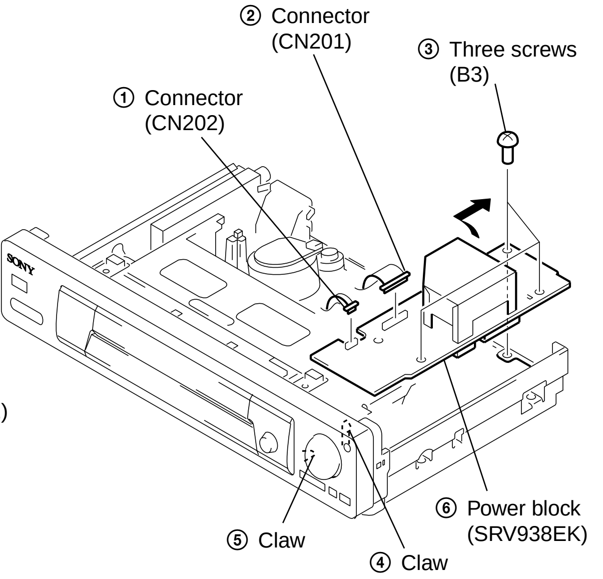
## 2-1. UPPER CASE REMOVAL


① Two screws
(Case3 TP2)
③ Upper case
② Two screws
(Case3 TP2)
SONY

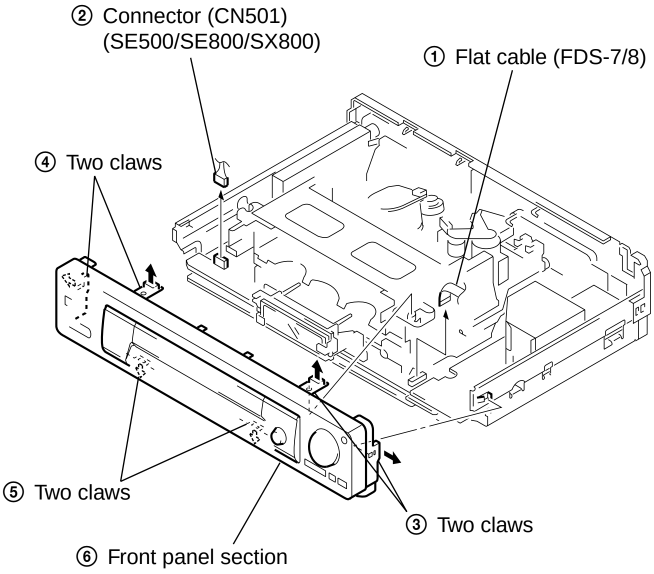
## 2-2. REAR PANEL REMOVAL


⑥ Claw (SE500R)
⑦ Claw
(EXCEPT SE350/SE500K/SE600/
SE700R/SE800K/SX600)
⑧ Rear panel
③ Three claws
① Power cord
(CN101)
② Harness
④ Two claws
⑤ Two claws
SONY

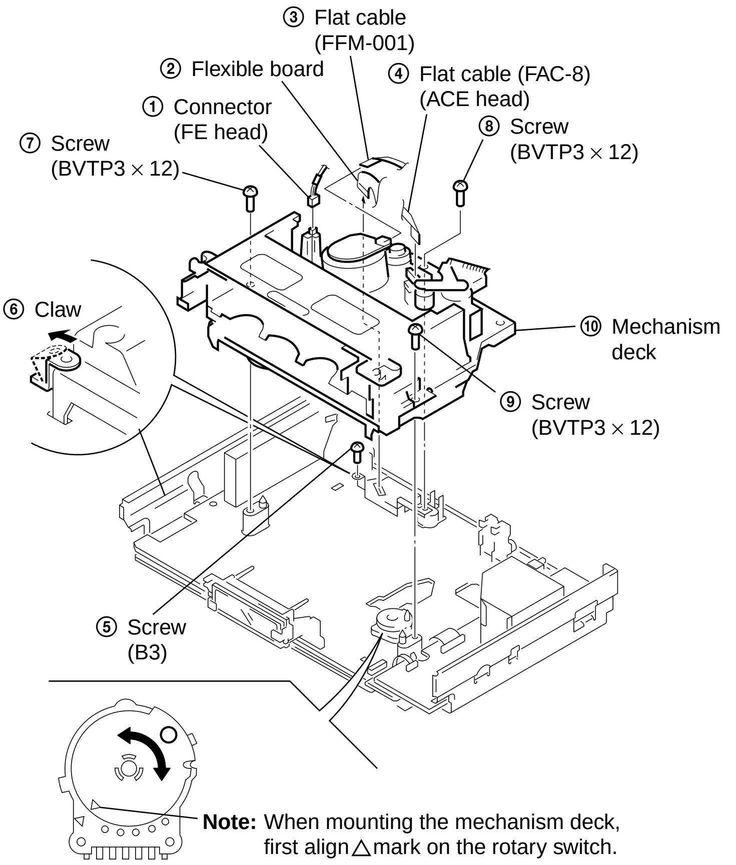
## 2-3. POWER BLOCK (SRV938EK) REMOVAL


② Connector
(CN201)
③ Three screws
(B3)
① Connector
(CN202)
⑥ Power block
(SRV938EK)
⑤ Claw
④ Claw
SONY

## 2-4. FRONT PANEL SECTION REMOVAL

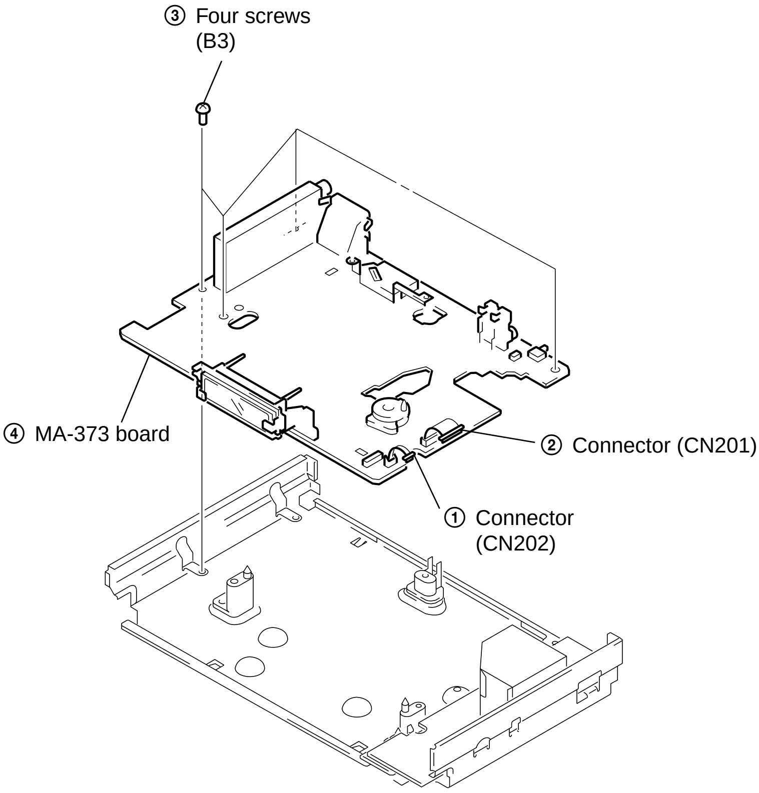

② Connector (CN501)
(SE500/SE800/SX800)
① Flat cable (FDS-7/8)
④ Two claws
⑤ Two claws
③ Two claws
⑥ Front panel section

## 2-5. MECHANISM DECK REMOVAL

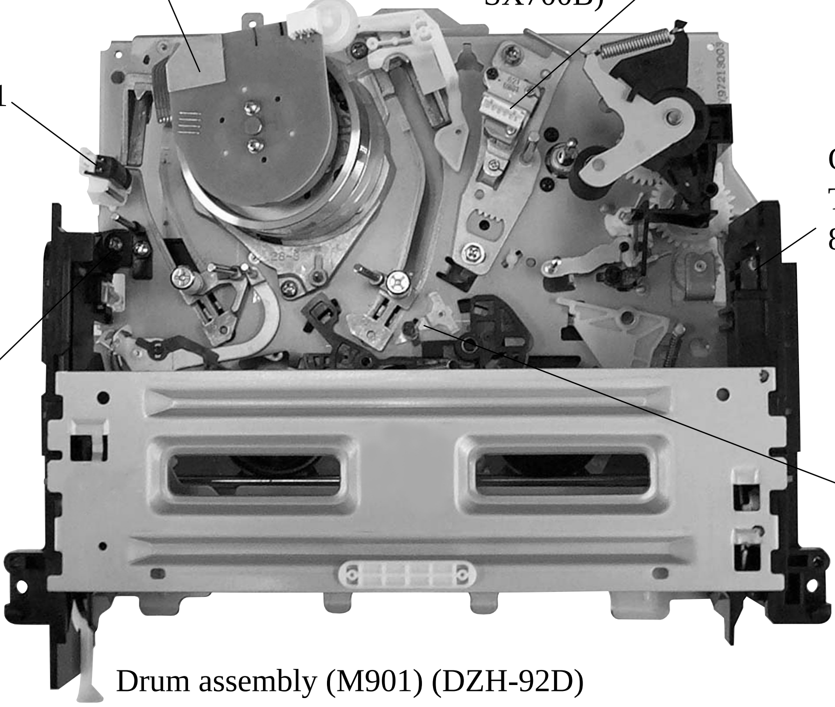

③ Flat cable (FFM-001)
② Flexible board
④ Flat cable (FAC-8) (ACE head)
① Connector (FE head)
⑧ Screw (BVTP3 × 12)
⑦ Screw (BVTP3 × 12)
⑥ Claw
⑩ Mechanism deck
⑨ Screw (BVTP3 × 12)
⑤ Screw (B3)

**Note:** When mounting the mechanism deck, first align △ mark on the rotary switch.

## 2-6. MA-373 BOARD REMOVAL


③ Four screws (B3)
④ MA-373 board
② Connector (CN201)
① Connector (CN202)

## 2-7. INTERNAL VIEWS



Drum assembly (M901) (DZH-92D)
1-772-361-11 (SE350)
Drum assembly (M901) (DZH-93D)
1-772-362-11 (SE500)
Drum assembly (M901) (DZH-0B5A)
1-772-364-11 (EXCEPT SE350/SE500/SE600B/SE700B/SE800B/SX700B)
Drum assembly (M901) (DZH-0B6A)
1-772-365-11 (SE600B/SE700B/SE800B/SX700B)

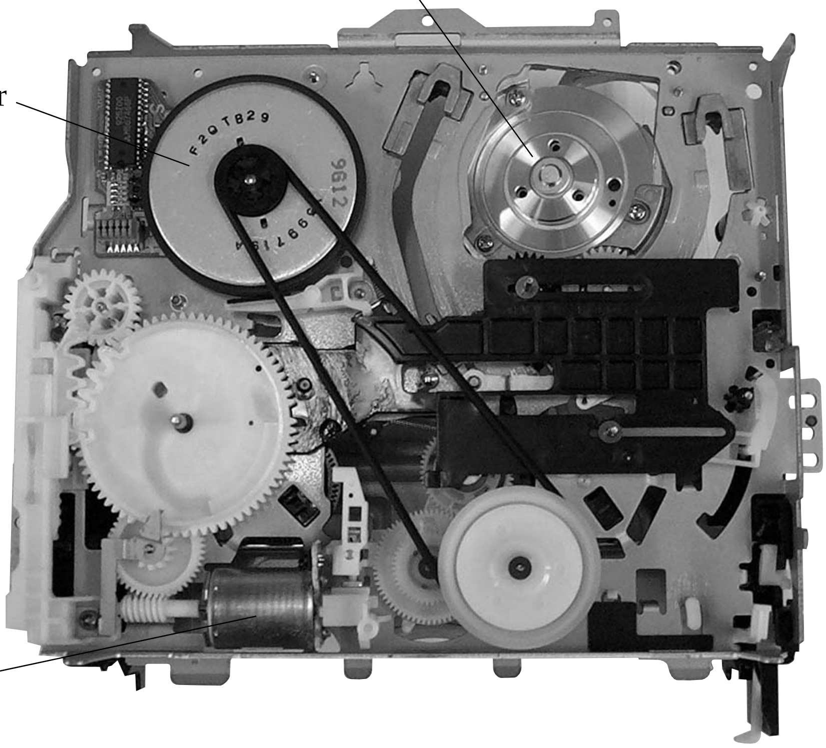
ACE head assembly
A-6775-791-A

FE head
1-500-144-11

Q001
Tape end sensor
8-729-043-84

Q002
Tape top sensor
8-729-043-84

D001
Tape top/end LED
8-719-048-26

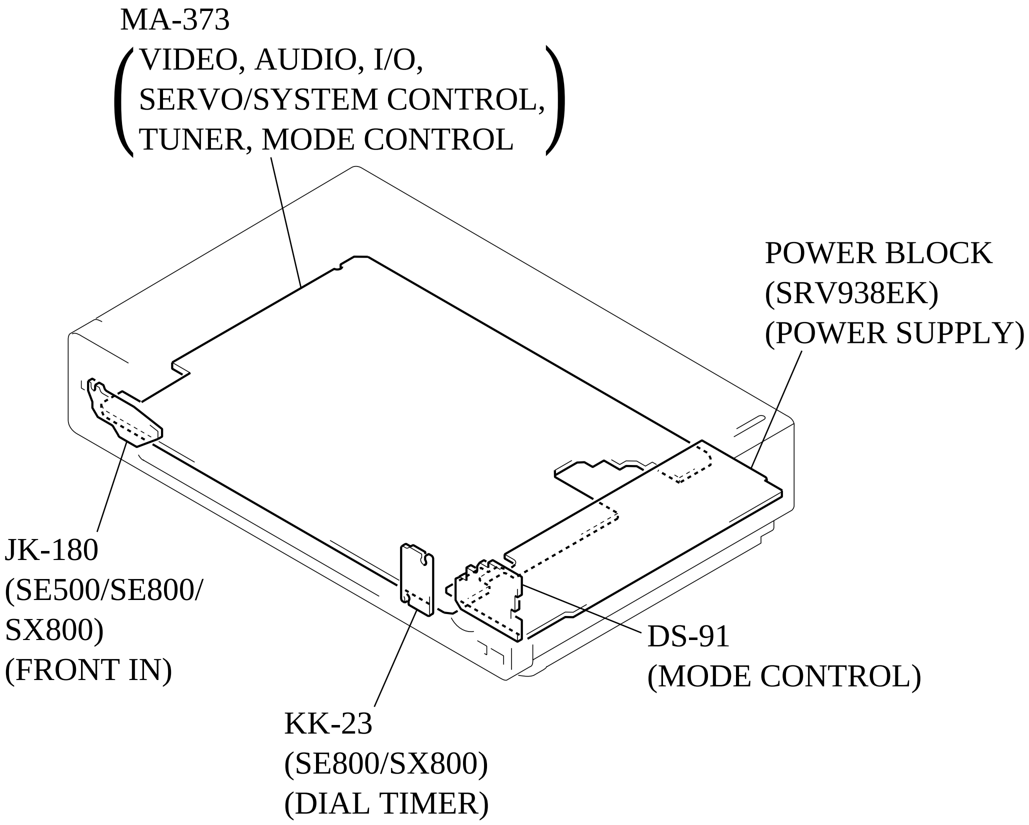


Drum assembly (M901) (DZH-92D)
1-772-361-11 (SE350)
Drum assembly (M901) (DZH-93D)
1-772-362-11 (SE500)
Drum assembly (M901) (DZH-0B5A)
1-772-364-11 (EXCEPT SE350/SE500/SE600B/SE700B/SE800B/SX700B)
Drum assembly (M901) (DZH-0B6A)
1-772-365-11 (SE600B/SE700B/SE800B/SX700B)

M902
Capstan motor
1-698-971-11

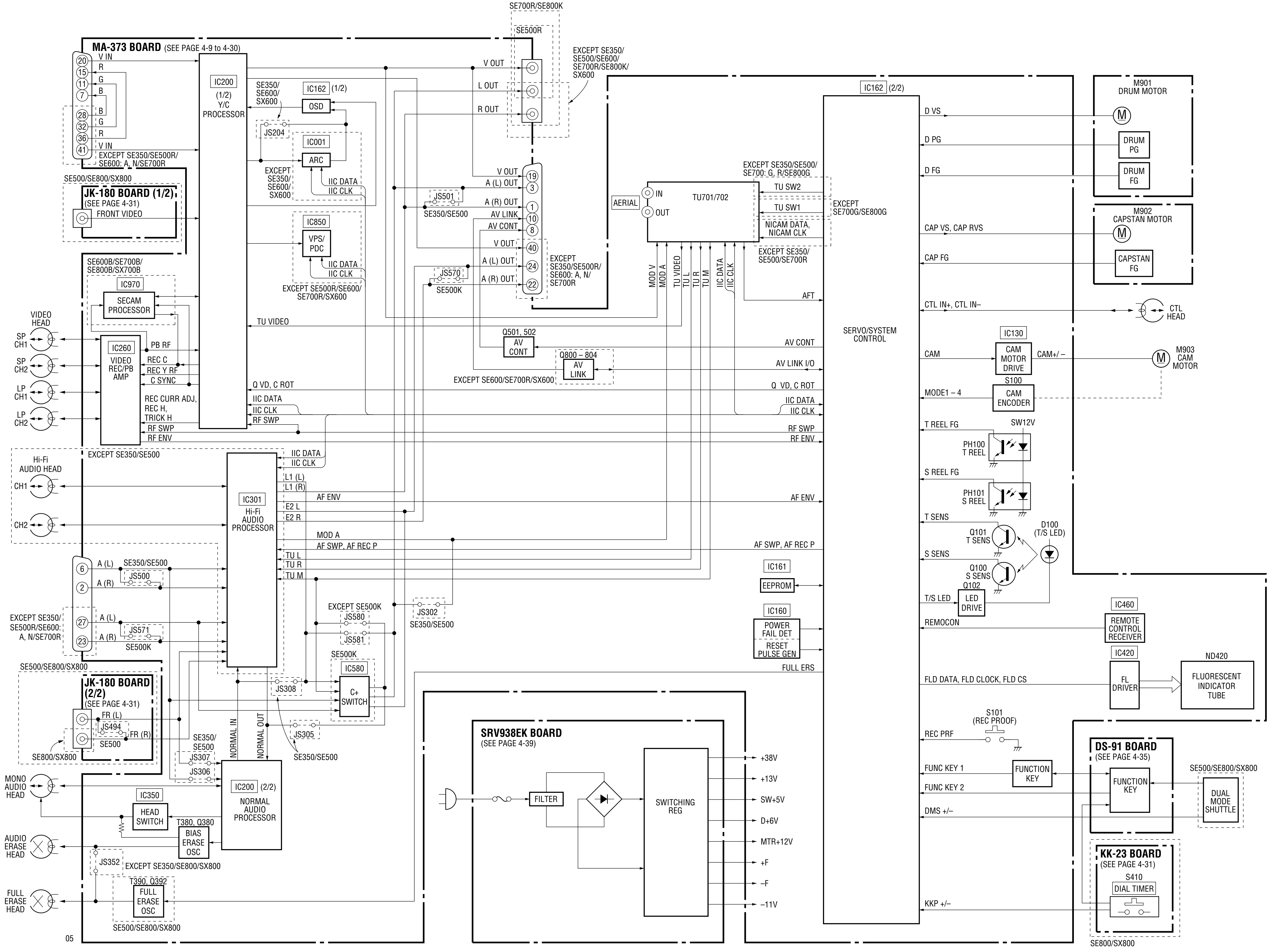
M903
Cam motor assembly
X-3947-577-1

## 2-8. CIRCUIT BOARDS LOCATION

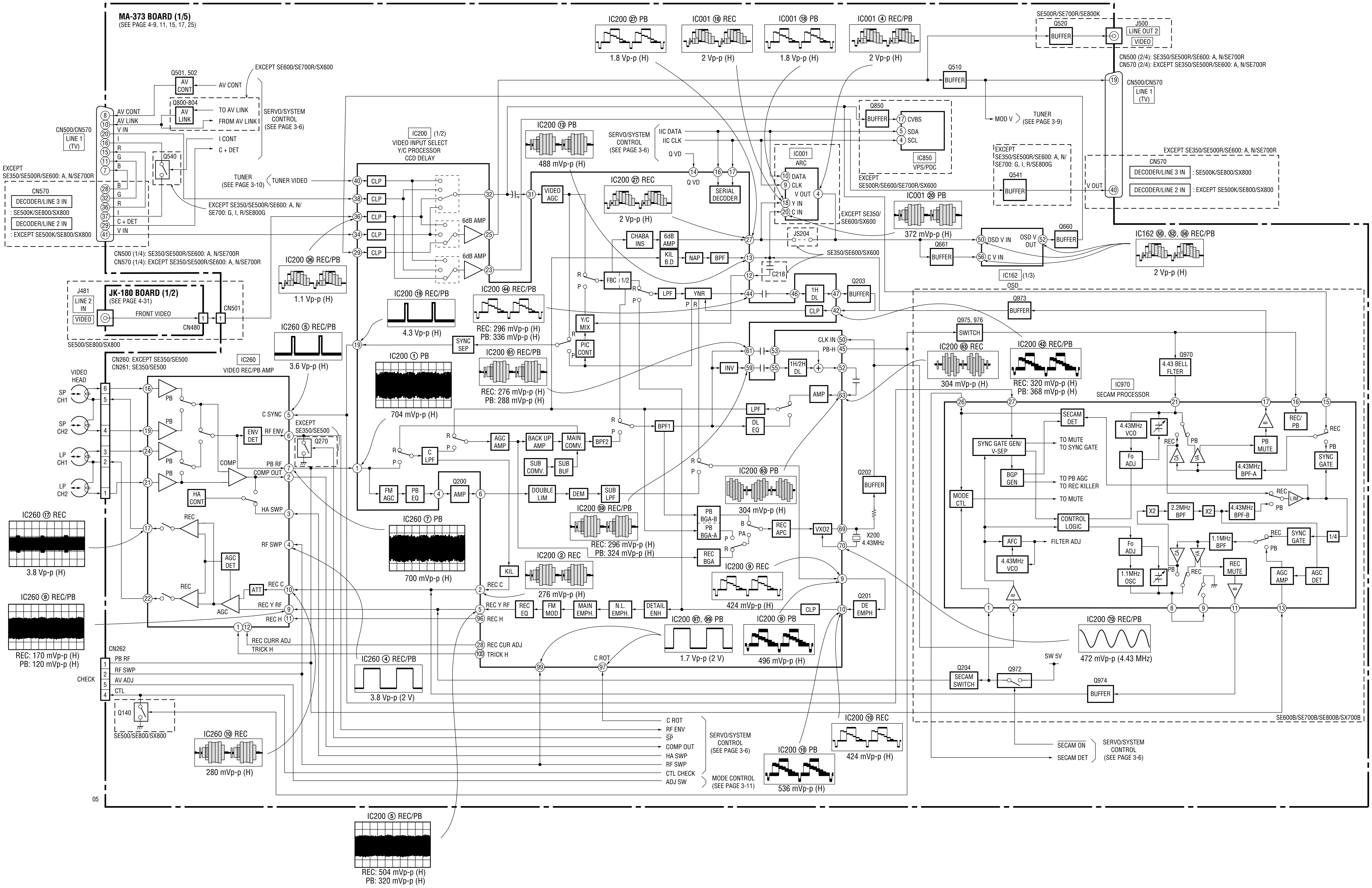

MA-373
(VIDEO, AUDIO, I/O,
SERVO/SYSTEM CONTROL,
TUNER, MODE CONTROL)
POWER BLOCK
(SRV938EK)
(POWER SUPPLY)
JK-180
(SE500/SE800/
SX800)
(FRONT IN)
DS-91
(MODE CONTROL)
KK-23
(SE800/SX800)
(DIAL TIMER)

# SECTION 3
# BLOCK DIAGRAMS

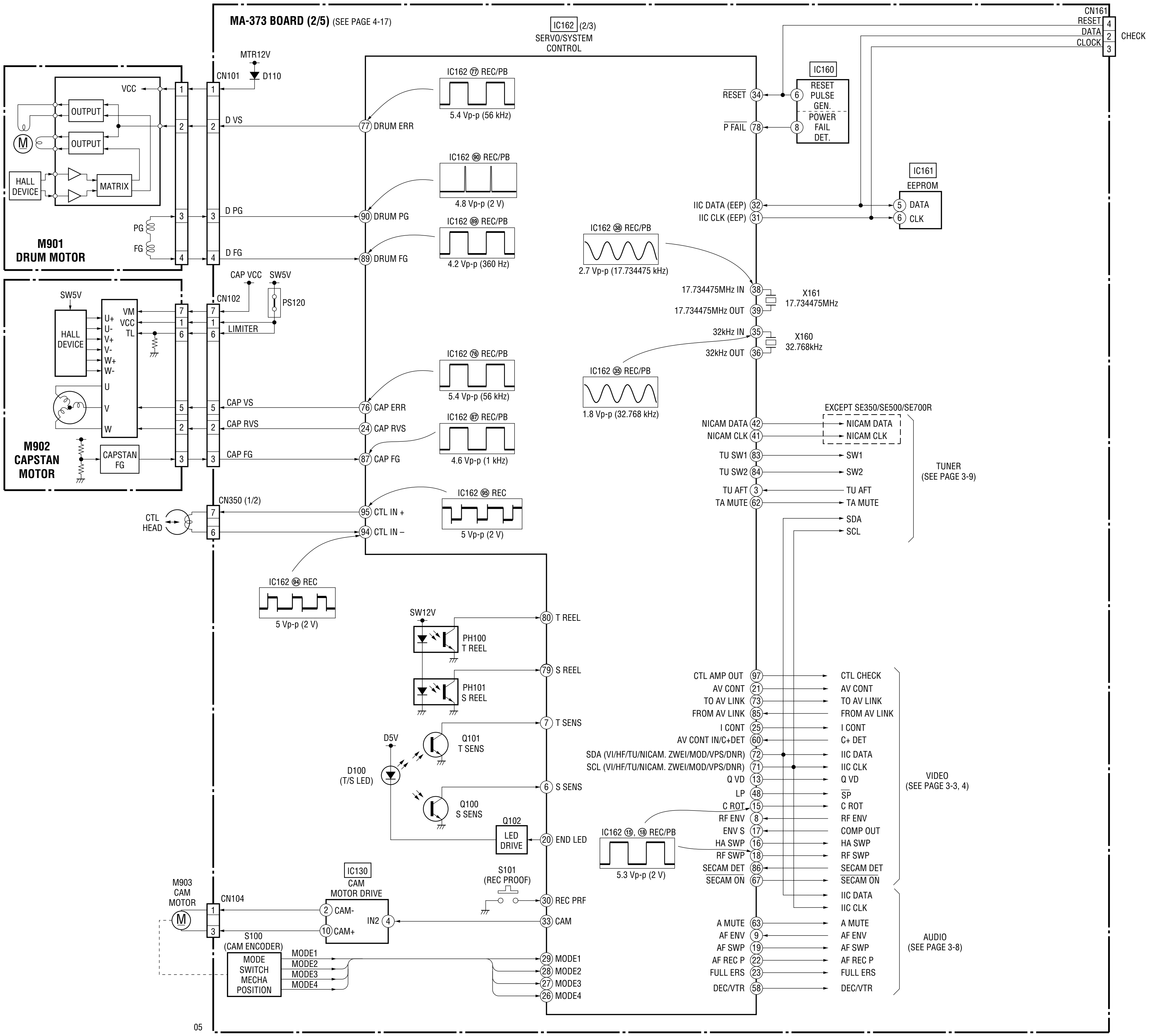
## 3-1. OVERALL BLOCK DIAGRAM


SE700R/SE800K
SE500R
EXCEPT SE350/SE500/SE600/SE700R/SE800K/SX600
MA-373 BOARD (SEE PAGE 4-9 to 4-30)
V IN
R
G
B
V IN
EXCEPT SE350/SE500R/SE600: A, N/SE700R
IC200 (1/2) Y/C PROCESSOR
SE350/SE600/SX600
IC162 (1/2)
OSD
JS204
IC001
ARC
EXCEPT SE350/SE600/SX600
IIC DATA
IIC CLK
IC850
VPS/PDC
EXCEPT SE500R/SE600/SE700R/SX600
V OUT
L OUT
R OUT
A (L) OUT
A (R) OUT
AV LINK
AV CONT
JS501
SE350/SE500
JS570
SE500K
EXCEPT SE350/SE500R/SE600: A, N/SE700R
SE500/SE800/SX800
JK-180 BOARD (1/2)
(SEE PAGE 4-31)
FRONT VIDEO
SE600B/SE700B/SE800B/SX700B
IC970
SECAM PROCESSOR
VIDEO HEAD
SP CH1
SP CH2
LP CH1
LP CH2
IC260
VIDEO REC/PB AMP
PB RF
REC C
REC Y RF
C SYNC
REC CURR ADJ, REC H, TRICK H
RF SWP
RF ENV
TU VIDEO
Q VD, C ROT
Q501, 502
AV CONT
Q800 – 804
AV LINK
EXCEPT SE600/SE700R/SX600
AERIAL
IN
OUT
TU701/702
EXCEPT SE350/SE500/SE700: G, R/SE800G
TU SW2
TU SW1
NICAM DATA, NICAM CLK
EXCEPT SE700G/SE800G
EXCEPT SE350/SE500/SE700R
MOD V
MOD A
TU VIDEO
TU L
TU R
TU M
IIC DATA
IIC CLK
AFT
AV LINK I/O
Hi-Fi AUDIO HEAD
CH1
CH2
EXCEPT SE350/SE500
IC301 Hi-Fi AUDIO PROCESSOR
L1 (L)
L1 (R)
AF ENV
E2 L
E2 R
MOD A
AF SWP, AF REC P
TU L
TU R
TU M
A (L)
A (R)
SE350/SE500
JS500
EXCEPT SE350/SE500R/SE600: A, N/SE700R
JS571
SE500K
EXCEPT SE500K
JS580
JS581
JS302
SE350/SE500
SE500K
IC580
C+ SWITCH
JS308
JS305
SE350/SE500
SE500/SE800/SX800
JK-180 BOARD (2/2)
(SEE PAGE 4-31)
FR (L)
JS494
FR (R)
SE500
SE800/SX800
SE350/SE500
JS307
JS306
NORMAL IN
NORMAL OUT
MONO AUDIO HEAD
IC350
HEAD SWITCH
T380, Q380
BIAS ERASE OSC
IC200 (2/2)
NORMAL AUDIO PROCESSOR
AUDIO ERASE HEAD
JS352
EXCEPT SE350/SE800/SX800
T390, Q392
FULL ERASE HEAD
FULL ERASE OSC
SE500/SE800/SX800
05
FULL ERS
SRV938EK BOARD
(SEE PAGE 4-39)
FILTER
SWITCHING REG
+38V
+13V
SW+5V
D+6V
MTR+12V
+F
–F
–11V
IC162 (2/2)
SERVO/SYSTEM CONTROL
IC161
EEPROM
IC160
POWER FAIL DET
RESET PULSE GEN
D VS
D PG
D FG
M901 DRUM MOTOR
DRUM PG
DRUM FG
CAP VS, CAP RVS
CAP FG
M902 CAPSTAN MOTOR
CAPSTAN FG
CTL IN+, CTL IN–
CTL HEAD
CAM
IC130
CAM MOTOR DRIVE
CAM+/ –
M903 CAM MOTOR
MODE1 – 4
S100
CAM ENCODER
T REEL FG
SW12V
PH100 T REEL
S REEL FG
PH101 S REEL
T SENS
Q101 T SENS
D100 (T/S LED)
S SENS
Q100 S SENS
Q102
T/S LED
LED DRIVE
REMOCON
IC460
REMOTE CONTROL RECEIVER
IC420
ND420
FLD DATA, FLD CLOCK, FLD CS
FL DRIVER
FLUORESCENT INDICATOR TUBE
REC PRF
S101 (REC PROOF)
FUNC KEY 1
FUNC KEY 2
FUNCTION KEY
DS-91 BOARD
(SEE PAGE 4-35)
FUNCTION KEY
SE500/SE800/SX800
DUAL MODE SHUTTLE
DMS +/–
KK-23 BOARD
(SEE PAGE 4-31)
S410
DIAL TIMER
KKP +/–
SE800/SX800
M

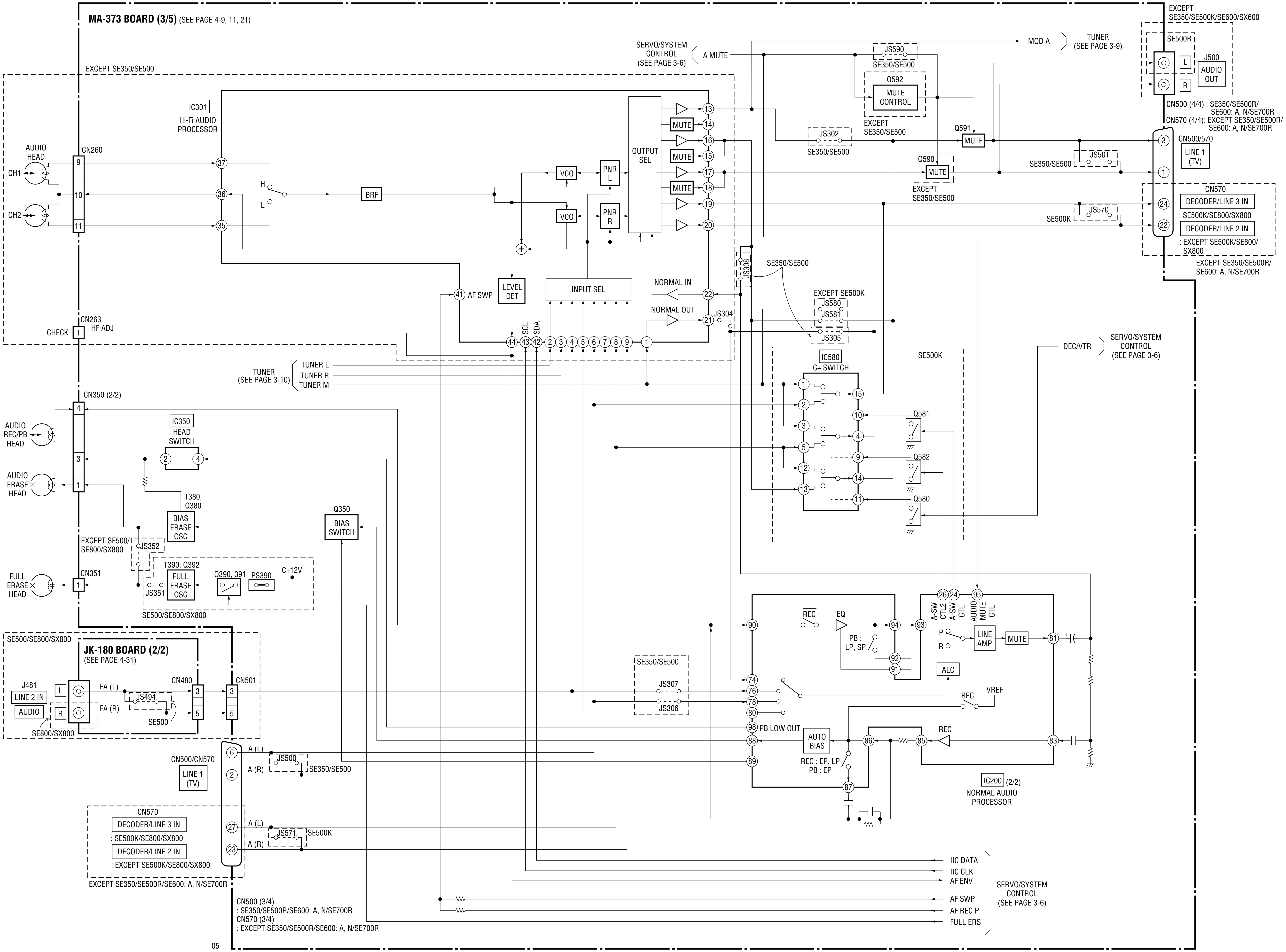
## 3-2. VIDEO BLOCK DIAGRAM


MA-373 BOARD (1/5)
(SEE PAGE 4-9, 11, 15, 17, 25)
JK-180 BOARD (1/2)
(SEE PAGE 4-31)
FRONT VIDEO
J481
LINE 2 IN
VIDEO
CN480
CN501
SE500/SE800/SX800
Q501, 502
AV CONT
Q800-804
AV LINK
TO AV LINK
FROM AV LINK
I CONT
C + DET
EXCEPT SE600/SE700R/SX600
SERVO/SYSTEM CONTROL (SEE PAGE 3-6)
CN500/CN570
LINE 1 (TV)
Q540
EXCEPT SE350/SE500R/SE600: A, N/SE700R
CN570
DECODER/LINE 3 IN
: SE500K/SE800/SX800
DECODER/LINE 2 IN
: EXCEPT SE500K/SE800/SX800
V IN
TUNER (SEE PAGE 3-10)
TUNER VIDEO
EXCEPT SE350/SE500R/SE600: A, N/SE700: G, I, R/SE800G
CN500 (1/4): SE350/SE500R/SE600: A, N/SE700R
CN570 (1/4): EXCEPT SE350/SE500R/SE600: A, N/SE700R
IC200 (1/2)
VIDEO INPUT SELECT
Y/C PROCESSOR
CCD DELAY
CLP
6dB AMP
VIDEO AGC
SERIAL DECODER
IIC DATA
IIC CLK
Q VD
IC001
ARC
DATA
CLK
V OUT
Y IN
C IN
JS204
C218
EXCEPT SE350/SE600/SX600
SE350/SE600/SX600
Q850
BUFFER
CVBS
SDA
SCL
IC850
VPS/PDC
EXCEPT SE500R/SE600/SE700R/SX600
Q510
BUFFER
MOD V
TUNER (SEE PAGE 3-9)
SE500R/SE700R/SE800K
Q520
J500
LINE OUT 2
VIDEO
CN500 (2/4): SE350/SE500R/SE600: A, N/SE700R
CN570 (2/4): EXCEPT SE350/SE500R/SE600: A, N/SE700R
EXCEPT SE350/SE500R/SE600: A, N/SE700: G, I, R/SE800G
Q541
V OUT
EXCEPT SE350/SE500R/SE600: A, N/SE700R
: SE500K/SE800/SX800
: EXCEPT SE500K/SE800/SX800
IC162 (1/3)
OSD
OSD V IN
C V IN
OSD V OUT
Q660
Q661
CHABA INS
6dB AMP
KIL B.D
NAP
BPF
FBC 1/2
LPF
YNR
1H DL
Q203
Y/C MIX
PIC CONT
SYNC SEP
INV
1H/2H DL
CLK IN
PB-H
AMP
DL EQ
BPF1
AGC AMP
BACK UP AMP
MAIN COMV.
BPF2
SUB COMV.
SUB BUF
C LPF
FM AGC
PB EQ
Q200
AMP
DOUBLE LIM
DEM
SUB LPF
PB BGA-B
PB BGA-A
REC APC
VXO2
X200 4.43MHz
Q202
REC BGA
KIL
REC EQ
FM MOD
MAIN EMPH.
N.L. EMPH.
DETAIL ENH
CLP
Q201
DE EMPH
C ROT
VIDEO HEAD
SP CH1
SP CH2
LP CH1
LP CH2
CN260: EXCEPT SE350/SE500
CN261: SE350/SE500
IC260
VIDEO REC/PB AMP
ENV DET
RF ENV
C SYNC
EXCEPT SE350/SE500
Q270
COMP
COMP OUT
PB RF
HA CONT
HA SWP
RF SWP
AGC DET
ATT
REC C
REC Y RF
REC H
AGC
REC CURR ADJ
TRICK H
REC CUR ADJ
CN262
PB RF
RF SWP
AV ADJ
CTL
CHECK
Q140
SE500/SE800/SX800
RF ENV
SP
COMP OUT
HA SWP
RF SWP
CTL CHECK
ADJ SW
SERVO/SYSTEM CONTROL (SEE PAGE 3-6)
MODE CONTROL (SEE PAGE 3-11)
Q973
BUFFER
Q975, 976
SWITCH
Q970
4.43 BELL FLTER
IC970
SECAM PROCESSOR
SECAM DET
SYNC GATE GEN/ V-SEP
TO MUTE
TO SYNC GATE
BGP GEN
TO PB AGC
TO REC KILLER
TO MUTE
MODE CTL
CONTROL LOGIC
AFC
FILTER ADJ
4.43MHz VCO
4.43MHz VCO
Fo ADJ
1.1MHz OSC
2.2MHz BPF
X2
4.43MHz BPF-B
4.43MHz BPF-A
PB MUTE
REC/PB
SYNC GATE
LIM
1.1MHz BPF
REC MUTE
AGC AMP
AGC DET
1/4
Q204
SECAM SWITCH
Q972
SW 5V
Q974
BUFFER
SECAM ON
SECAM DET
SE600B/SE700B/SE800B/SX700B
IC200 ㉗ PB
1.8 Vp-p (H)
IC001 ⑱ REC
2 Vp-p (H)
IC001 ⑱ PB
1.8 Vp-p (H)
IC001 ④ REC/PB
2 Vp-p (H)
IC200 ⑬ PB
488 mVp-p (H)
IC200 ㉗ REC
2 Vp-p (H)
IC001 ⑳ PB
372 mVp-p (H)
IC162 (50), (52), (56) REC/PB
2 Vp-p (H)
IC200 ㊱ REC/PB
1.1 Vp-p (H)
IC200 ⑲ REC/PB
4.3 Vp-p (H)
IC200 ㊹ REC/PB
REC: 296 mVp-p (H)
PB: 336 mVp-p (H)
IC260 ⑤ REC/PB
3.6 Vp-p (H)
IC200 ① PB
704 mVp-p (H)
IC200 (61) REC/PB
REC: 276 mVp-p (H)
PB: 288 mVp-p (H)
IC200 (63) REC
304 mVp-p (H)
IC200 ㊷ REC/PB
REC: 320 mVp-p (H)
PB: 368 mVp-p (H)
IC200 (63) PB
304 mVp-p (H)
IC200 (59) REC/PB
REC: 296 mVp-p (H)
PB: 324 mVp-p (H)
IC260 ⑦ PB
700 mVp-p (H)
IC200 ② REC
276 mVp-p (H)
IC200 ⑨ REC
424 mVp-p (H)
IC200 (97), (99) PB
1.7 Vp-p (2 V)
IC200 ⑨ PB
496 mVp-p (H)
IC200 (70) REC/PB
472 mVp-p (4.43 MHz)
IC260 ⑰ REC
3.8 Vp-p (H)
IC260 ⑨ REC/PB
REC: 170 mVp-p (H)
PB: 120 mVp-p (H)
IC260 ④ REC/PB
3.8 Vp-p (2 V)
IC200 ⑩ REC
424 mVp-p (H)
IC260 ⑩ REC
280 mVp-p (H)
IC200 ⑩ PB
536 mVp-p (H)
IC200 ⑤ REC/PB
REC: 504 mVp-p (H)
PB: 320 mVp-p (H)
05

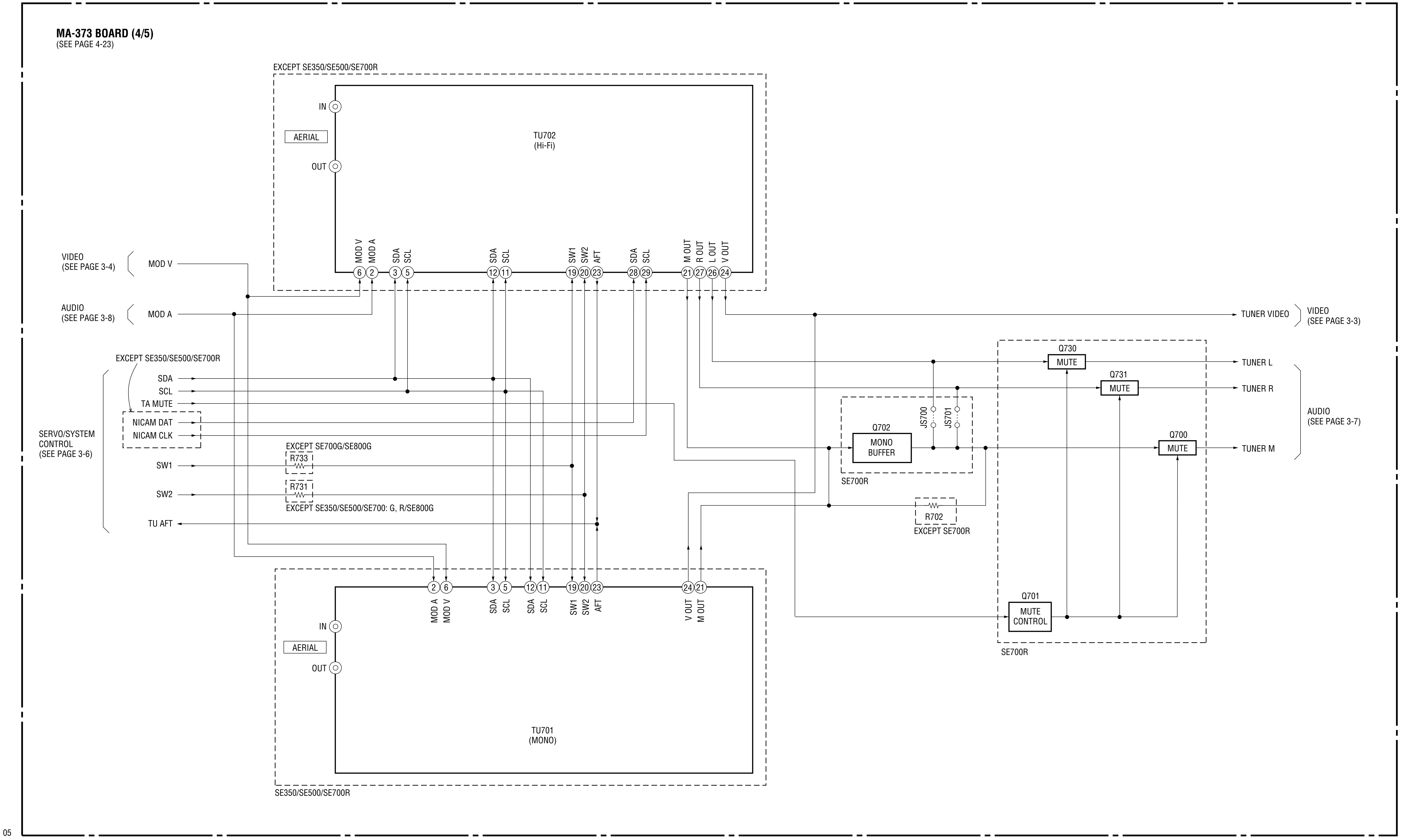
## 3-3. SERVO/SYSTEM CONTROL BLOCK DIAGRAM


MA-373 BOARD (2/5) (SEE PAGE 4-17)
IC162 (2/3)
SERVO/SYSTEM CONTROL
CN161
RESET 4
DATA 2
CLOCK 3
CHECK
MTR12V
D110
CN101
VCC
OUTPUT
OUTPUT
M
HALL DEVICE
MATRIX
PG
FG
M901
DRUM MOTOR
D VS
D PG
D FG
IC162 (77) REC/PB
5.4 Vp-p (56 kHz)
77 DRUM ERR
IC162 (90) REC/PB
4.8 Vp-p (2 V)
90 DRUM PG
IC162 (89) REC/PB
4.2 Vp-p (360 Hz)
89 DRUM FG
IC162 ㊳ REC/PB
2.7 Vp-p (17.734475 kHz)
RESET 34
P FAIL 78
IC160
RESET PULSE GEN.
POWER FAIL DET.
IC161
EEPROM
DATA
CLK
IIC DATA (EEP) 32
IIC CLK (EEP) 31
17.734475MHz IN 38
17.734475MHz OUT 39
X161
17.734475MHz
32kHz IN 35
32kHz OUT 36
X160
32.768kHz
IC162 ㉟ REC/PB
1.8 Vp-p (32.768 kHz)
CAP VCC
SW5V
PS120
CN102
LIMITER
SW5V
HALL DEVICE
U+ U- V+ V- W+ W-
VM VCC TL
U V W
CAPSTAN FG
M902
CAPSTAN MOTOR
CAP VS
CAP RVS
CAP FG
IC162 (76) REC/PB
5.4 Vp-p (56 kHz)
76 CAP ERR
24 CAP RVS
IC162 (87) REC/PB
4.6 Vp-p (1 kHz)
87 CAP FG
EXCEPT SE350/SE500/SE700R
NICAM DATA 42
NICAM CLK 41
TU SW1 83
TU SW2 84
TU AFT 3
TA MUTE 62
NICAM DATA
NICAM CLK
SW1
SW2
TU AFT
TA MUTE
SDA
SCL
TUNER
(SEE PAGE 3-9)
CN350 (1/2)
CTL HEAD
IC162 (95) REC
5 Vp-p (2 V)
95 CTL IN +
94 CTL IN –
IC162 (94) REC
5 Vp-p (2 V)
SW12V
PH100
T REEL
PH101
S REEL
80 T REEL
79 S REEL
7 T SENS
D5V
Q101
T SENS
D100
(T/S LED)
Q100
S SENS
6 S SENS
Q102
LED DRIVE
20 END LED
IC162 ⑮, ⑱ REC/PB
5.3 Vp-p (2 V)
CTL AMP OUT 97
AV CONT 21
TO AV LINK 73
FROM AV LINK 85
I CONT 25
AV CONT IN/C+DET 60
SDA (VI/HF/TU/NICAM. ZWEI/MOD/VPS/DNR) 72
SCL (VI/HF/TU/NICAM. ZWEI/MOD/VPS/DNR) 71
Q VD 13
LP 48
C ROT 15
RF ENV 8
ENV S 17
HA SWP 16
RF SWP 18
SECAM DET 86
SECAM ON 67
CTL CHECK
AV CONT
TO AV LINK
FROM AV LINK
I CONT
C+ DET
IIC DATA
IIC CLK
Q VD
SP
C ROT
RF ENV
COMP OUT
HA SWP
RF SWP
SECAM DET
SECAM ON
VIDEO
(SEE PAGE 3-3, 4)
IIC DATA
IIC CLK
M903
CAM MOTOR
CN104
IC130
CAM MOTOR DRIVE
CAM-
CAM+
IN2
S101
(REC PROOF)
30 REC PRF
33 CAM
S100
(CAM ENCODER)
MODE SWITCH MECHA POSITION
MODE1
MODE2
MODE3
MODE4
29 MODE1
28 MODE2
27 MODE3
26 MODE4
A MUTE 63
AF ENV 9
AF SWP 19
AF REC P 22
FULL ERS 23
DEC/VTR 58
A MUTE
AF ENV
AF SWP
AF REC P
FULL ERS
DEC/VTR
AUDIO
(SEE PAGE 3-8)
05

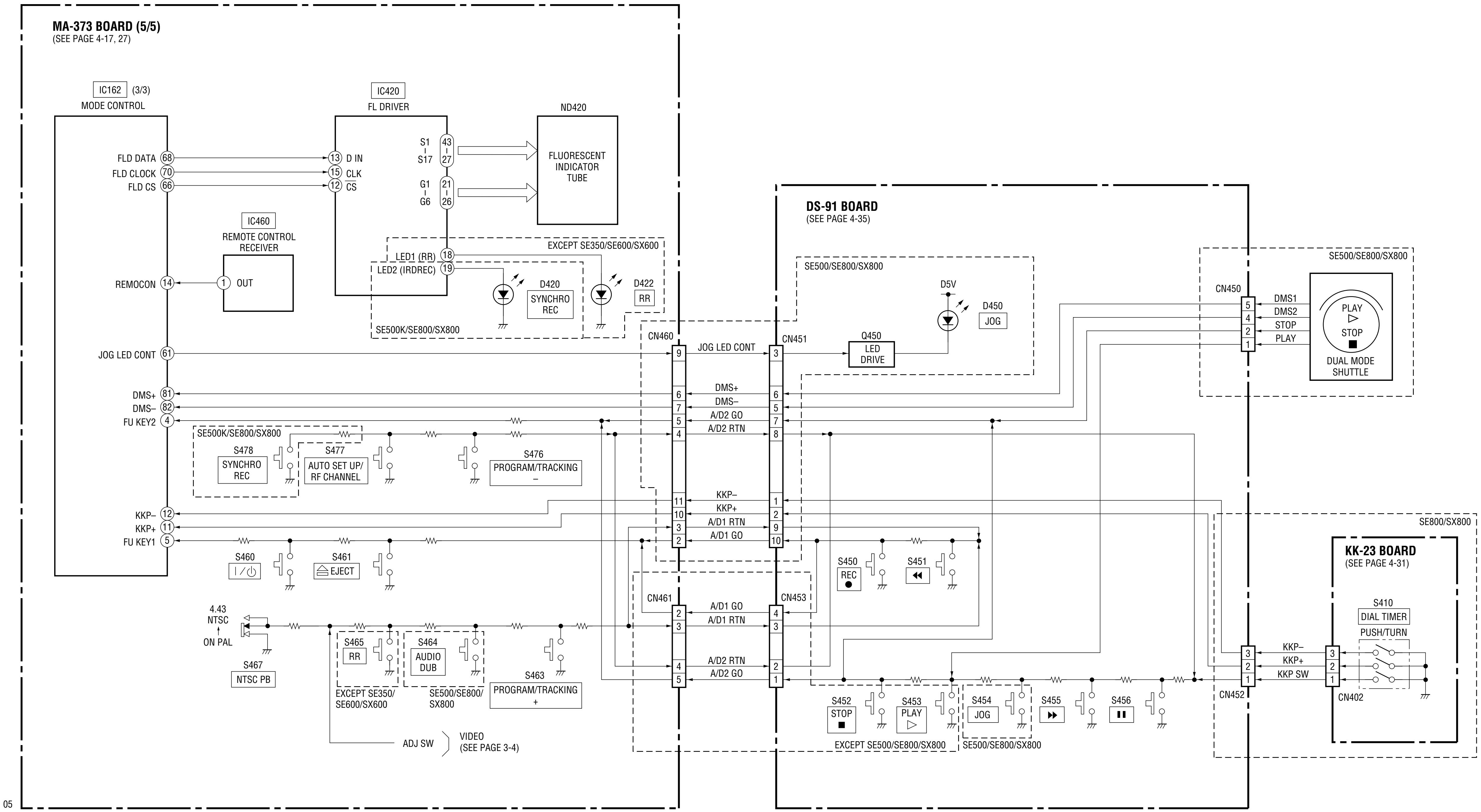
## 3-4. AUDIO BLOCK DIAGRAM


MA-373 BOARD (3/5) (SEE PAGE 4-9, 11, 21)
EXCEPT SE350/SE500
IC301
Hi-Fi AUDIO PROCESSOR
AUDIO HEAD
CH1
CH2
CN260
H
L
BRF
VCO
PNR L
PNR R
OUTPUT SEL
MUTE
LEVEL DET
INPUT SEL
NORMAL IN
NORMAL OUT
AF SWP
SCL
SDA
CN263
HF ADJ
CHECK
JS304
JS308
SERVO/SYSTEM CONTROL (SEE PAGE 3-6)
A MUTE
MOD A
TUNER (SEE PAGE 3-9)
JS590
SE350/SE500
Q592
MUTE CONTROL
EXCEPT SE350/SE500
JS302
Q591
Q590
EXCEPT SE350/SE500K/SE600/SX600
SE500R
J500
AUDIO OUT
CN500 (4/4) : SE350/SE500R/ SE600: A, N/SE700R
CN570 (4/4): EXCEPT SE350/SE500R/ SE600: A, N/SE700R
CN500/570
LINE 1 (TV)
JS501
SE350/SE500 L
CN570
DECODER/LINE 3 IN
: SE500K/SE800/SX800
DECODER/LINE 2 IN
: EXCEPT SE500K/SE800/ SX800
JS570
SE500K L
EXCEPT SE350/SE500R/ SE600: A, N/SE700R
EXCEPT SE500K
JS580
JS581
JS305
IC580
C+ SWITCH
SE500K
Q581
Q582
Q580
DEC/VTR
TUNER (SEE PAGE 3-10)
TUNER L
TUNER R
TUNER M
CN350 (2/2)
AUDIO REC/PB HEAD
AUDIO ERASE HEAD
IC350
HEAD SWITCH
T380, Q380
BIAS ERASE OSC
Q350
BIAS SWITCH
EXCEPT SE500/SE800/SX800
JS352
CN351
FULL ERASE HEAD
T390, Q392
FULL ERASE OSC
Q390, 391
PS390
C+12V
JS351
SE500/SE800/SX800
SE500/SE800/SX800
JK-180 BOARD (2/2) (SEE PAGE 4-31)
J481
LINE 2 IN
AUDIO
L
R
FA (L)
FA (R)
JS494
SE500
CN480
CN501
SE800/SX800
CN500/CN570
LINE 1 (TV)
A (L)
A (R)
JS500
SE350/SE500
CN570
DECODER/LINE 3 IN
: SE500K/SE800/SX800
DECODER/LINE 2 IN
: EXCEPT SE500K/SE800/SX800
JS571
SE500K
EXCEPT SE350/SE500R/SE600: A, N/SE700R
CN500 (3/4)
: SE350/SE500R/SE600: A, N/SE700R
CN570 (3/4)
: EXCEPT SE350/SE500R/SE600: A, N/SE700R
SE350/SE500
JS307
JS306
REC
EQ
PB : LP, SP
A-SW CTL2
A-SW CTL
AUDIO MUTE CTL
P
R
LINE AMP
MUTE
ALC
REC
VREF
PB LOW OUT
AUTO BIAS
REC : EP, LP
PB : EP
REC
IC200 (2/2)
NORMAL AUDIO PROCESSOR
IIC DATA
IIC CLK
AF ENV
AF SWP
AF REC P
FULL ERS
SERVO/SYSTEM CONTROL (SEE PAGE 3-6)
05

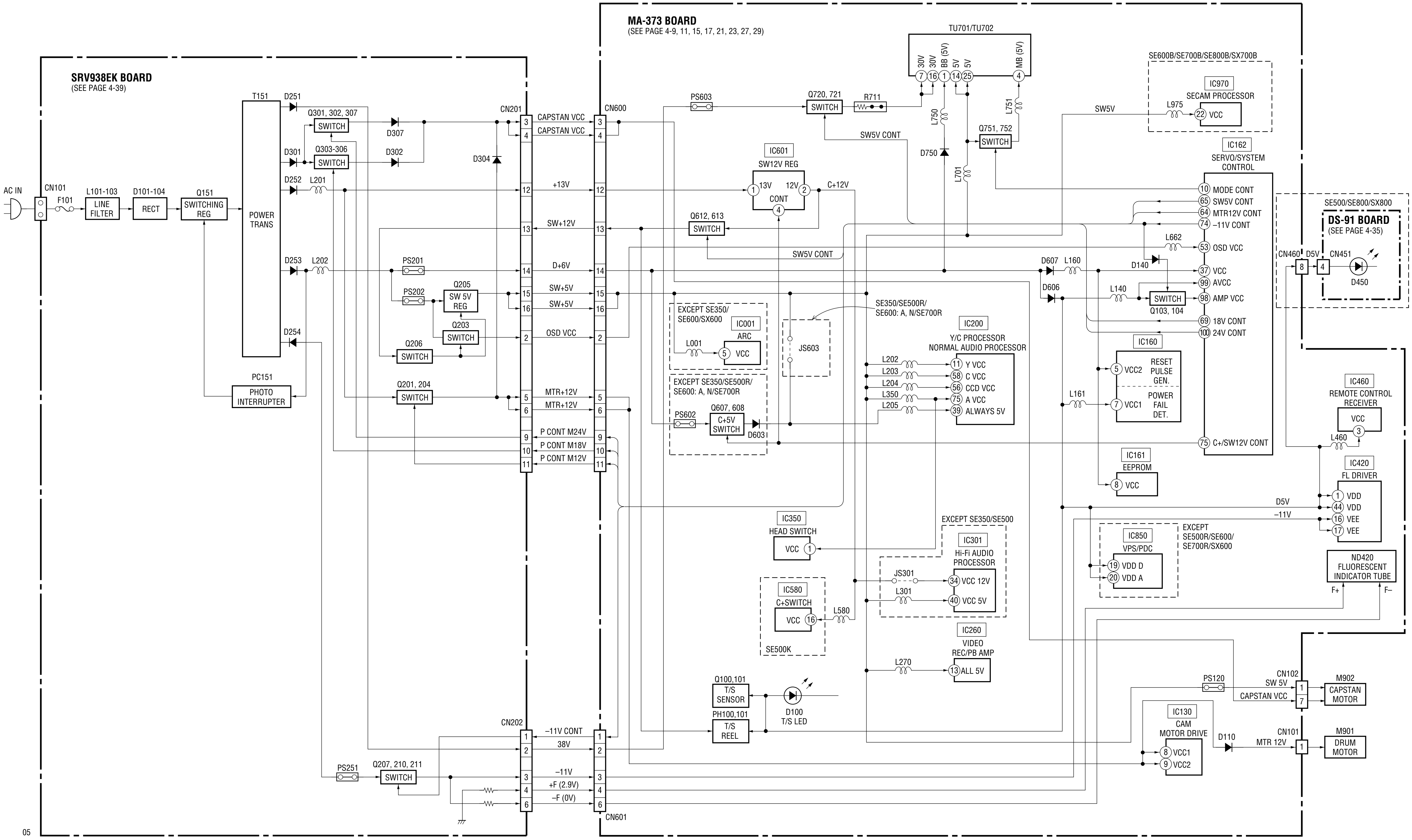
## 3-5. TUNER BLOCK DIAGRAM


MA-373 BOARD (4/5)
(SEE PAGE 4-23)
EXCEPT SE350/SE500/SE700R
IN
AERIAL
OUT
TU702
(Hi-Fi)
MOD V
MOD A
SDA
SCL
SDA
SCL
SW1
SW2
AFT
SDA
SCL
M OUT
R OUT
L OUT
V OUT
6 2 3 5 12 11 19 20 23 28 29 21 27 26 24
VIDEO
(SEE PAGE 3-4)
MOD V
AUDIO
(SEE PAGE 3-8)
MOD A
EXCEPT SE350/SE500/SE700R
SDA
SCL
TA MUTE
NICAM DAT
NICAM CLK
SERVO/SYSTEM
CONTROL
(SEE PAGE 3-6)
SW1
SW2
TU AFT
EXCEPT SE700G/SE800G
R733
R731
EXCEPT SE350/SE500/SE700: G, R/SE800G
TUNER VIDEO
VIDEO
(SEE PAGE 3-3)
Q730
MUTE
TUNER L
Q731
MUTE
TUNER R
AUDIO
(SEE PAGE 3-7)
Q702
MONO
BUFFER
JS700
JS701
SE700R
Q700
MUTE
TUNER M
R702
EXCEPT SE700R
Q701
MUTE
CONTROL
SE700R
2 6 3 5 12 11 19 20 23 24 21
MOD A
MOD V
SDA
SCL
SDA
SCL
SW1
SW2
AFT
V OUT
M OUT
IN
AERIAL
OUT
TU701
(MONO)
SE350/SE500/SE700R
05

## 3-6. MODE CONTROL BLOCK DIAGRAM


MA-373 BOARD (5/5)
(SEE PAGE 4-17, 27)
IC162 (3/3)
MODE CONTROL
IC420
FL DRIVER
ND420
FLUORESCENT INDICATOR TUBE
FLD DATA 68
FLD CLOCK 70
FLD CS 66
13 D IN
15 CLK
12 CS
S1 – S17 43 – 27
G1 – G6 21 – 26
IC460
REMOTE CONTROL RECEIVER
REMOCON 14
1 OUT
LED1 (RR) 18
LED2 (IRDREC) 19
EXCEPT SE350/SE600/SX600
D420 SYNCHRO REC
D422 RR
SE500K/SE800/SX800
JOG LED CONT 61
DMS+ 81
DMS– 82
FU KEY2 4
KKP– 12
KKP+ 11
FU KEY1 5
S478 SYNCHRO REC
S477 AUTO SET UP/ RF CHANNEL
S476 PROGRAM/TRACKING –
S460 I/⏻
S461 EJECT
4.43 NTSC
ON PAL
S467 NTSC PB
S465 RR
S464 AUDIO DUB
S463 PROGRAM/TRACKING +
EXCEPT SE350/ SE600/SX600
SE500/SE800/ SX800
ADJ SW
VIDEO (SEE PAGE 3-4)
05
CN460
CN451
CN461
CN453
JOG LED CONT
DMS+
DMS–
A/D2 GO
A/D2 RTN
KKP–
KKP+
A/D1 RTN
A/D1 GO
DS-91 BOARD
(SEE PAGE 4-35)
SE500/SE800/SX800
D5V
D450 JOG
Q450 LED DRIVE
CN450
DMS1
DMS2
STOP
PLAY
PLAY ▷
STOP ■
DUAL MODE SHUTTLE
S450 REC ●
S451 ◀◀
S452 STOP ■
S453 PLAY ▷
S454 JOG
S455 ▶▶
S456 ❚❚
EXCEPT SE500/SE800/SX800
SE500/SE800/SX800
SE800/SX800
KK-23 BOARD
(SEE PAGE 4-31)
S410 DIAL TIMER
PUSH/TURN
CN452
CN402
KKP–
KKP+
KKP SW

## 3-7. POWER BLOCK DIAGRAM


SRV938EK BOARD
(SEE PAGE 4-39)
AC IN
CN101
F101
L101-103
LINE FILTER
D101-104
RECT
Q151
SWITCHING REG
T151
POWER TRANS
PC151
PHOTO INTERRUPTER
D251
D252
D253
D254
L201
L202
D301
D302
D304
D307
Q301, 302, 307
SWITCH
Q303-306
SWITCH
PS201
PS202
Q205
SW 5V REG
Q203
SWITCH
Q206
SWITCH
Q201, 204
SWITCH
PS251
Q207, 210, 211
SWITCH
CN201
CAPSTAN VCC
CAPSTAN VCC
+13V
SW+12V
D+6V
SW+5V
SW+5V
OSD VCC
MTR+12V
MTR+12V
P CONT M24V
P CONT M18V
P CONT M12V
CN202
–11V CONT
38V
–11V
+F (2.9V)
–F (0V)
05
MA-373 BOARD
(SEE PAGE 4-9, 11, 15, 17, 21, 23, 27, 29)
CN600
CN601
TU701/TU702
30V
30V
BB (5V)
5V
5V
MB (5V)
PS603
Q720, 721
SWITCH
R711
SW5V CONT
L750
D750
L701
L751
Q751, 752
SWITCH
IC601
SW12V REG
13V
12V
CONT
C+12V
Q612, 613
SWITCH
SW5V CONT
EXCEPT SE350/ SE600/SX600
IC001
ARC
L001
VCC
EXCEPT SE350/SE500R/ SE600: A, N/SE700R
PS602
Q607, 608
C+5V SWITCH
D603
JS603
SE350/SE500R/ SE600: A, N/SE700R
IC200
Y/C PROCESSOR NORMAL AUDIO PROCESSOR
L202
L203
L204
L350
L205
Y VCC
C VCC
CCD VCC
A VCC
ALWAYS 5V
IC350
HEAD SWITCH
VCC
EXCEPT SE350/SE500
IC301
Hi-Fi AUDIO PROCESSOR
JS301
L301
VCC 12V
VCC 5V
IC580
C+SWITCH
VCC
L580
SE500K
IC260
VIDEO REC/PB AMP
L270
ALL 5V
Q100,101
T/S SENSOR
D100
T/S LED
PH100,101
T/S REEL
SE600B/SE700B/SE800B/SX700B
IC970
SECAM PROCESSOR
L975
VCC
SW5V
IC162
SERVO/SYSTEM CONTROL
MODE CONT
SW5V CONT
MTR12V CONT
–11V CONT
L662
OSD VCC
D607
L160
D140
VCC
AVCC
D606
L140
SWITCH
Q103, 104
AMP VCC
18V CONT
24V CONT
IC160
VCC2
RESET PULSE GEN.
VCC1
POWER FAIL DET.
L161
C+/SW12V CONT
IC161
EEPROM
VCC
D5V
–11V
IC850
VPS/PDC
VDD D
VDD A
EXCEPT SE500R/SE600/ SE700R/SX600
SE500/SE800/SX800
DS-91 BOARD
(SEE PAGE 4-35)
CN460
D5V
CN451
D450
IC460
REMOTE CONTROL RECEIVER
VCC
L460
IC420
FL DRIVER
VDD
VDD
VEE
VEE
ND420
FLUORESCENT INDICATOR TUBE
F+
F–
PS120
CN102
SW 5V
CAPSTAN VCC
M902
CAPSTAN MOTOR
IC130
CAM MOTOR DRIVE
VCC1
VCC2
D110
CN101
MTR 12V
M901
DRUM MOTOR

# SECTION 4

# PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

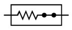
**THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.**
**(In addition to this, the necessary note is printed in each block.)**

**For printed wiring board:**

- ○—— : indicates a lead wire mounted on the component side.
- ●—— : indicates a lead wire mounted on the printed side.
- ▒ : Pattern from the side which enables seeing.

(The other layers' patterns are not indicated.)

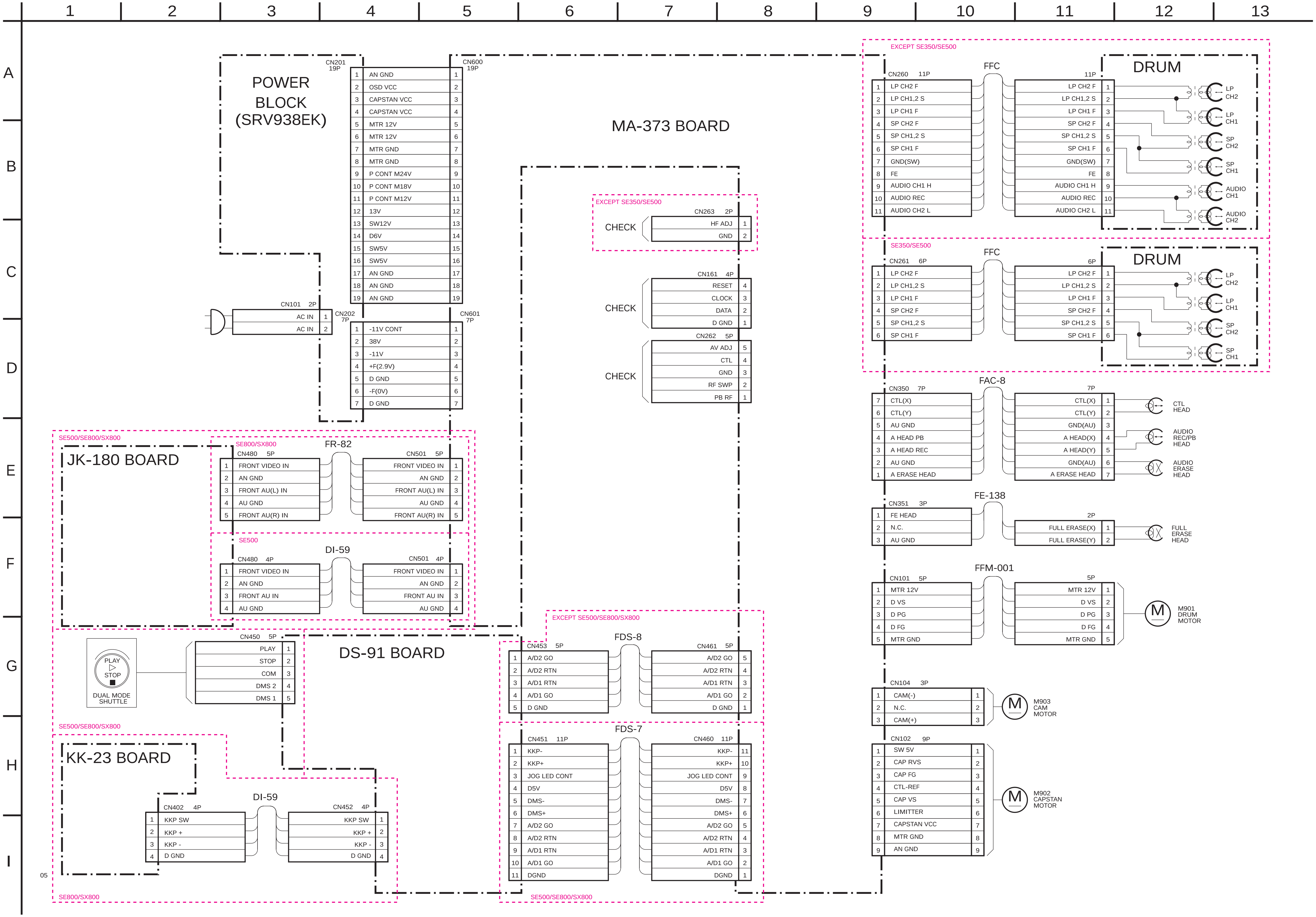
**For schematic Diagram:**

- Caution when replacing chip parts.
  New parts must be attached after removal of chip.
  Be careful not to heat the minus side of tantalum capacitor, because it is damaged by the heat.
- All resistors are in ohms, $^{1}/_{4}$ W (Chip resistors : $^{1}/_{10}$ W) unless otherwise specified.
  kΩ : 1000Ω, MW : 1000kΩ.
- All capacitors are in µF unless otherwise noted. pF : µµF
  50V or less are not indicated except for electrolytics and tantalums.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- : nonflammable resistor.
-  : fusible resistor.
- ☐ : panel designation.
- △ : internal component.
- ☐ : adjustment for repair.
- B + : B+ Line.
- B – : B– Line.
- Circled numbers refer to waveforms.
- Voltages are dc between measurement point.
- Readings are taken with a color-bar signal input.
- Readings are taken with a digital multimeter (DC 10MW).
- Voltage variations may be noted due to normal production tolerances.

**Note:** The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board name.

## 4-1. FRAME SCHEMATIC DIAGRAM

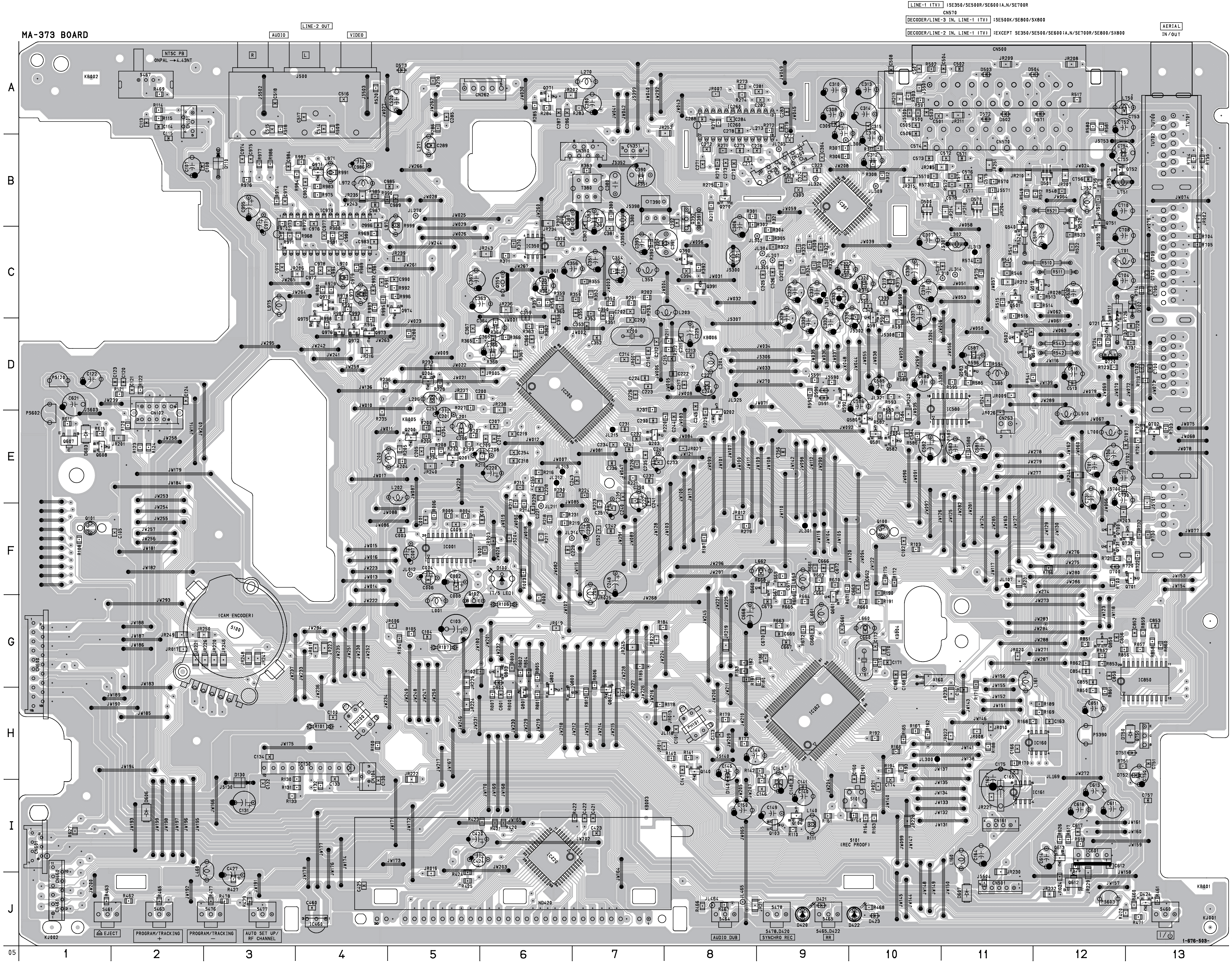

1 2 3 4 5 6 7 8 9 10 11 12 13
A B C D E F G H I
POWER BLOCK (SRV938EK)
CN201 19P
CN600 19P
1 AN GND
2 OSD VCC
3 CAPSTAN VCC
4 CAPSTAN VCC
5 MTR 12V
6 MTR 12V
7 MTR GND
8 MTR GND
9 P CONT M24V
10 P CONT M18V
11 P CONT M12V
12 13V
13 SW12V
14 D6V
15 SW5V
16 SW5V
17 AN GND
18 AN GND
19 AN GND
CN101 2P
1 AC IN
2 AC IN
CN202 7P
CN601 7P
1 -11V CONT
2 38V
3 -11V
4 +F(2.9V)
5 D GND
6 -F(0V)
7 D GND
MA-373 BOARD
EXCEPT SE350/SE500
CHECK
CN263 2P
1 HF ADJ
2 GND
CHECK
CN161 4P
4 RESET
3 CLOCK
2 DATA
1 D GND
CHECK
CN262 5P
5 AV ADJ
4 CTL
3 GND
2 RF SWP
1 PB RF
EXCEPT SE350/SE500
FFC
DRUM
CN260 11P
11P
1 LP CH2 F
2 LP CH1,2 S
3 LP CH1 F
4 SP CH2 F
5 SP CH1,2 S
6 SP CH1 F
7 GND(SW)
8 FE
9 AUDIO CH1 H
10 AUDIO REC
11 AUDIO CH2 L
LP CH2
LP CH1
SP CH2
SP CH1
AUDIO CH1
AUDIO CH2
SE350/SE500
FFC
DRUM
CN261 6P
6P
1 LP CH2 F
2 LP CH1,2 S
3 LP CH1 F
4 SP CH2 F
5 SP CH1,2 S
6 SP CH1 F
LP CH2
LP CH1
SP CH2
SP CH1
FAC-8
CN350 7P
7P
7 CTL(X)
6 CTL(Y)
5 AU GND
4 A HEAD PB
3 A HEAD REC
2 AU GND
1 A ERASE HEAD
1 CTL(X)
2 CTL(Y)
3 GND(AU)
4 A HEAD(X)
5 A HEAD(Y)
6 GND(AU)
7 A ERASE HEAD
CTL HEAD
AUDIO REC/PB HEAD
AUDIO ERASE HEAD
FE-138
CN351 3P
2P
1 FE HEAD
2 N.C.
3 AU GND
1 FULL ERASE(X)
2 FULL ERASE(Y)
FULL ERASE HEAD
FFM-001
CN101 5P
5P
1 MTR 12V
2 D VS
3 D PG
4 D FG
5 MTR GND
M
M901 DRUM MOTOR
CN104 3P
1 CAM(-)
2 N.C.
3 CAM(+)
M
M903 CAM MOTOR
CN102 9P
1 SW 5V
2 CAP RVS
3 CAP FG
4 CTL-REF
5 CAP VS
6 LIMITTER
7 CAPSTAN VCC
8 MTR GND
9 AN GND
M
M902 CAPSTAN MOTOR
SE500/SE800/SX800
JK-180 BOARD
SE800/SX800
FR-82
CN480 5P
CN501 5P
1 FRONT VIDEO IN
2 AN GND
3 FRONT AU(L) IN
4 AU GND
5 FRONT AU(R) IN
SE500
DI-59
CN480 4P
CN501 4P
1 FRONT VIDEO IN
2 AN GND
3 FRONT AU IN
4 AU GND
DS-91 BOARD
PLAY ▷ STOP ■
DUAL MODE SHUTTLE
CN450 5P
1 PLAY
2 STOP
3 COM
4 DMS 2
5 DMS 1
EXCEPT SE500/SE800/SX800
FDS-8
CN453 5P
CN461 5P
1 A/D2 GO
2 A/D2 RTN
3 A/D1 RTN
4 A/D1 GO
5 D GND
FDS-7
CN451 11P
CN460 11P
1 KKP-
2 KKP+
3 JOG LED CONT
4 D5V
5 DMS-
6 DMS+
7 A/D2 GO
8 A/D2 RTN
9 A/D1 RTN
10 A/D1 GO
11 DGND
SE500/SE800/SX800
SE500/SE800/SX800
KK-23 BOARD
DI-59
CN402 4P
CN452 4P
1 KKP SW
2 KKP +
3 KKP -
4 D GND
05
SE800/SX800

There are few cases that the part isn't mounted in this model is printed on this diagram.

## 4-2. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

### MA-373 (VIDEO, AUDIO, I/O, SERVO/SYSTEM CONTROL, TUNER, MODE CONTROL) PRINTED WIRING BOARD

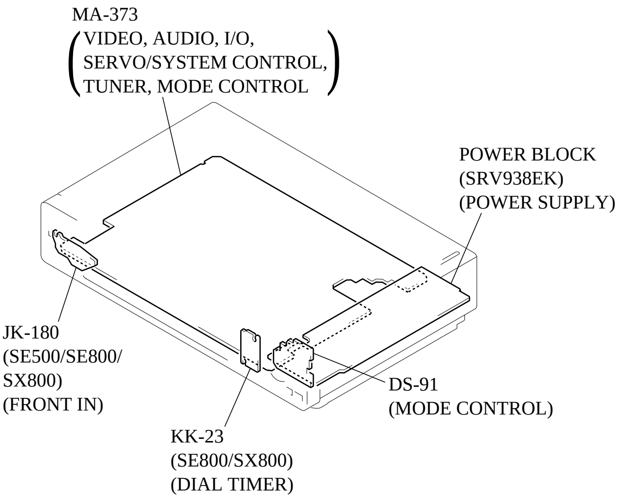
– Ref. No.: MA-373 board; 1,000 series –


CN500
LINE-1 (TV) :SE350/SE500R/SE600:A,N/SE700R
CN570
DECODER/LINE-3 IN, LINE-1 (TV) :SE500K/SE800/SX800
DECODER/LINE-2 IN, LINE-1 (TV) :EXCEPT SE350/SE500/SE600:A,N/SE700R/SE800/SX800
AERIAL
IN/OUT
MA-373 BOARD
AUDIO
LINE-2 OUT
VIDEO
R
L
J500
NTSC PB
ONPAL → 4.43NT
CN500
CAM ENCODER
IC001
IC200
IC301
IC602
IC420
IC850
T/S LED
S101
(REC PROOF)
ND420
EJECT
PROGRAM/TRACKING +
PROGRAM/TRACKING –
AUTO SET UP/ RF CHANNEL
AUDIO DUB
SYNCHRO REC
1-676-509-11
A
B
C
D
E
F
G
H
I
J
05
1
2
3
4
5
6
7
8
9
10
11
12
13

MA-373 BOARD

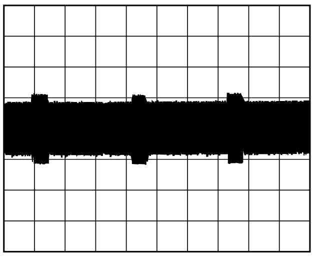
| | |
|---|---|
| CN101 | A-2 |
| CN102 | E-2 |
| CN104 | H-4 |
| CN161 | I-11 |
| CN260 | B-9 |
| CN261 | B-9 |
| CN262 | A-6 |
| CN263 | E-11 |
| CN350 | B-7 |
| CN351 | B-7 |
| CN460 | J-1 |
| CN461 | J-1 |
| CN500 | A-11 |
| CN501 | J-11 |
| CN570 | B-11 |
| CN600 | G-1 |
| CN601 | I-1 |
| | |
| D100 | F-6 |
| D110 | B-3 |
| D140 | I-8 |
| D420 | J-9 |
| D421 | J-9 |
| D422 | J-10 |
| D423 | J-10 |
| D424 | J-13 |
| D500 | B-10 |
| D501 | B-12 |
| D502 | A-11 |
| D503 | A-11 |
| D504 | A-11 |
| D570 | B-11 |
| D571 | A-12 |
| D572 | A-11 |
| D573 | A-5 |
| D590 | D-9 |
| D591 | D-9 |
| D603 | E-1 |
| D606 | I-2 |
| D607 | J-11 |
| D700 | F-12 |
| D702 | C-13 |
| D750 | H-13 |
| D800 | G-6 |
| | |
| IC001 | F-5 |
| IC130 | H-4 |
| IC160 | H-12 |
| IC161 | I-11 |
| IC162 | H-9 |
| IC200 | D-6 |
| IC260 | A-6 |
| IC301 | B-9 |
| IC350 | C-6 |
| IC420 | I-6 |
| IC460 | J-4 |
| IC580 | D-11 |
| IC601 | I-12 |
| IC850 | G-13 |
| IC970 | B-4 |

| | |
|---|---|
| Q100 | F-10 |
| Q101 | F-1 |
| Q102 | F-5 |
| Q103 | I-9 |
| Q104 | I-9 |
| Q140 | H-8 |
| Q200 | E-5 |
| Q201 | E-5 |
| Q202 | E-8 |
| Q203 | E-7 |
| Q204 | D-5 |
| Q270 | B-8 |
| Q350 | C-6 |
| Q380 | B-6 |
| Q390 | C-8 |
| Q391 | C-8 |
| Q392 | B-8 |
| Q501 | C-11 |
| Q502 | D-11 |
| Q510 | C-11 |
| Q520 | B-12 |
| Q540 | C-11 |
| Q541 | D-11 |
| Q580 | E-10 |
| Q581 | E-10 |
| Q582 | E-10 |
| Q583 | D-11 |
| Q590 | C-10 |
| Q591 | D-10 |
| Q592 | D-9 |
| Q607 | E-1 |
| Q608 | E-1 |
| Q612 | J-12 |
| Q613 | I-12 |
| Q660 | F-8 |
| Q661 | G-9 |
| Q700 | F-12 |
| Q701 | F-13 |
| Q702 | E-13 |
| Q720 | D-12 |
| Q721 | D-12 |
| Q730 | F-13 |
| Q731 | F-12 |
| Q751 | B-12 |
| Q752 | B-13 |
| Q800 | G-6 |
| Q801 | H-6 |
| Q802 | G-6 |
| Q803 | G-6 |
| Q804 | H-7 |
| Q850 | G-12 |
| Q970 | C-4 |
| Q972 | D-4 |
| Q973 | D-4 |
| Q974 | C-5 |
| Q975 | D-4 |
| Q976 | D-4 |


MA-373
(VIDEO, AUDIO, I/O,
SERVO/SYSTEM CONTROL,
TUNER, MODE CONTROL)
POWER BLOCK
(SRV938EK)
(POWER SUPPLY)
JK-180
(SE500/SE800/
SX800)
(FRONT IN)
DS-91
(MODE CONTROL)
KK-23
(SE800/SX800)
(DIAL TIMER)

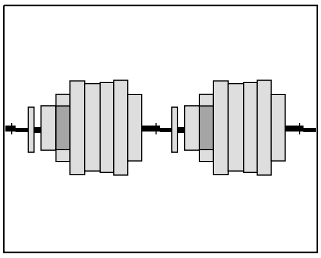
- **Waveforms**

❶ IC260 ⑰ REC



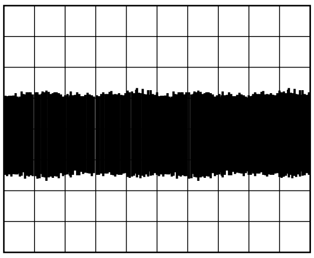
3.8 Vp-p (H)

❷ IC260 ⑩ REC



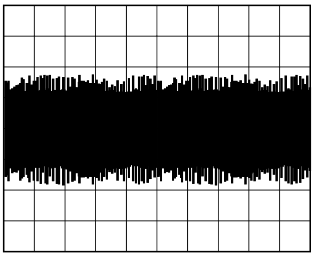
280 mVp-p (H)

❸ IC260 ⑨ REC/PB



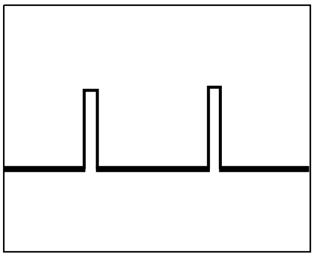
REC : 170 mVp-p (H)
PB : 120 mVp-p (H)

❹ IC260 ⑦ PB



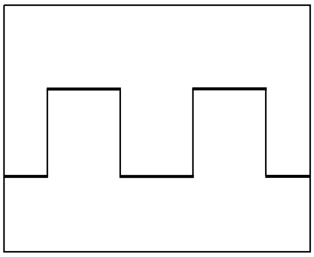
700 mVp-p (H)

❺ IC260 ⑤ REC/PB



3.6 Vp-p (H)

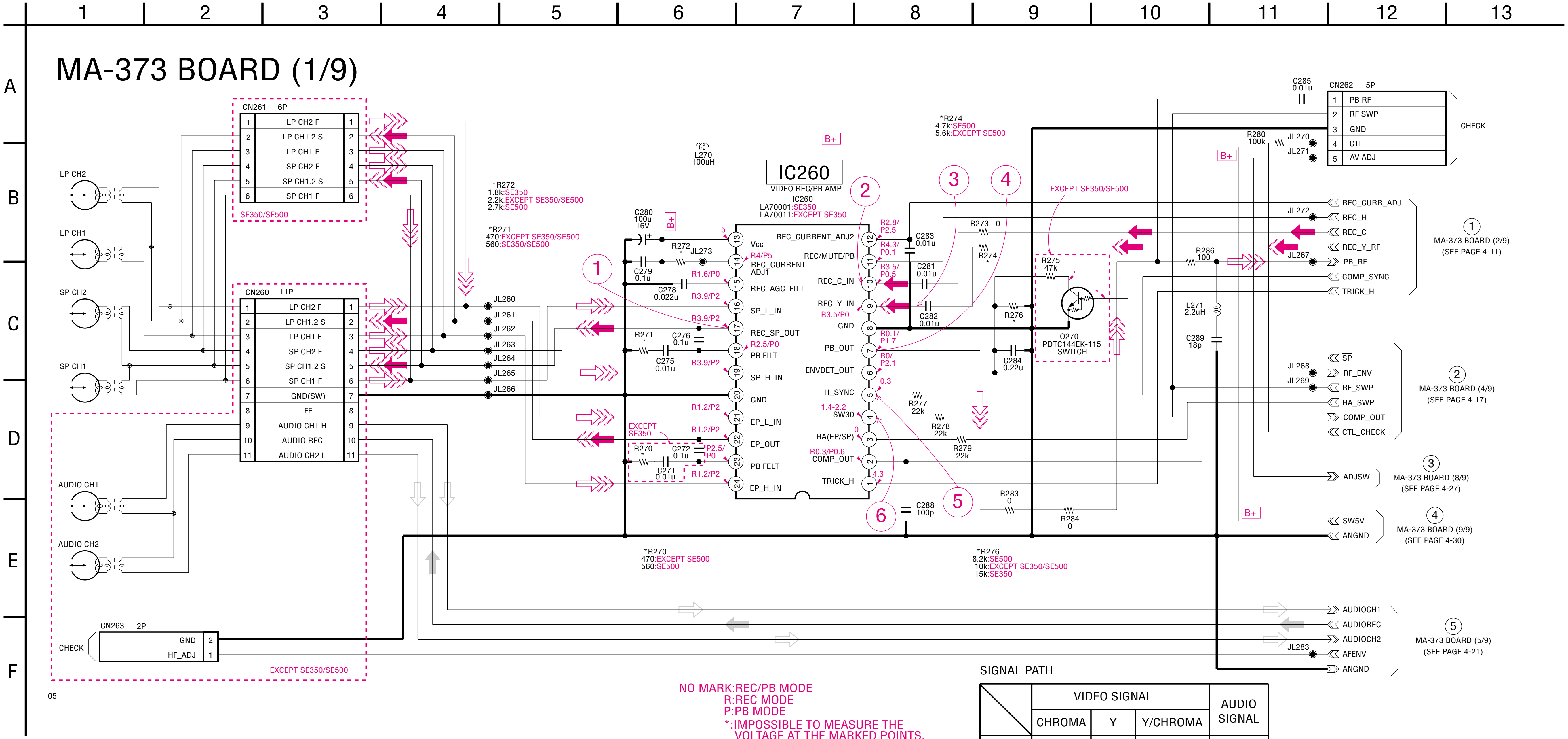
❻ IC260 ④ REC/PB



3.8 Vp-p (2 V)

## MA-373 (HEAD AMP) SCHEMATIC DIAGRAM • See page 4-5 for printed wiring board.

– Ref. No.: MA-373 board; 1,000 series –


1 2 3 4 5 6 7 8 9 10 11 12 13
A B C D E F
MA-373 BOARD (1/9)
CN261 6P
LP CH2 F
LP CH1.2 S
LP CH1 F
SP CH2 F
SP CH1.2 S
SP CH1 F
SE350/SE500
CN260 11P
GND(SW)
FE
AUDIO CH1 H
AUDIO REC
AUDIO CH2 L
LP CH2
LP CH1
SP CH2
SP CH1
AUDIO CH1
AUDIO CH2
CN263 2P
CHECK
GND
HF_ADJ
EXCEPT SE350/SE500
05
JL260
JL261
JL262
JL263
JL264
JL265
JL266
*R272
1.8k:SE350
2.2k:EXCEPT SE350/SE500
2.7k:SE500
*R271
470:EXCEPT SE350/SE500
560:SE350/SE500
L270
100uH
B+
IC260
VIDEO REC/PB AMP
IC260
LA70001:SE350
LA70011:EXCEPT SE350
C280
100u
16V
C279
0.1u
R272
JL273
C278
0.022u
R271
C276
0.1u
C275
0.01u
EXCEPT
SE350
R270
C272
0.1u
C271
0.01u
Vcc
R4/P5
REC_CURRENT ADJ1
REC_AGC_FILT
SP_L_IN
REC_SP_OUT
R2.5/P0
PB FILT
SP_H_IN
GND
EP_L_IN
EP_OUT
PB FELT
EP_H_IN
R1.6/P0
R3.9/P2
R3.9/P2
R3.9/P2
R1.2/P2
R1.2/P2
P2.5/P0
R1.2/P2
REC_CURRENT_ADJ2
REC/MUTE/PB
REC_C_IN
REC_Y_IN
R3.5/P0
GND
PB_OUT
ENVDET_OUT
H_SYNC
1.4-2.2
SW30
HA(EP/SP)
0
R0.3/P0.6
COMP_OUT
TRICK_H
4.3
R2.8/P2.5
R4.3/P0.1
R3.5/P0.5
R0.1/P1.7
R0/P2.1
0.3
C283
0.01u
C281
0.01u
C282
0.01u
R273 0
R274
*R274
4.7k:SE500
5.6k:EXCEPT SE500
R277
22k
R278
22k
R279
22k
C288
100p
R283
0
R284
0
C284
0.22u
R276
R275
47k
Q270
PDTC144EK-115
SWITCH
EXCEPT SE350/SE500
R286
100
L271
2.2uH
C289
18p
R280
100k
C285
0.01u
CN262 5P
PB RF
RF SWP
GND
CTL
AV ADJ
CHECK
JL270
JL271
JL272
JL267
JL268
JL269
JL283
REC_CURR_ADJ
REC_H
REC_C
REC_Y_RF
PB_RF
COMP_SYNC
TRICK_H
① MA-373 BOARD (2/9) (SEE PAGE 4-11)
SP
RF_ENV
RF_SWP
HA_SWP
COMP_OUT
CTL_CHECK
② MA-373 BOARD (4/9) (SEE PAGE 4-17)
ADJSW
③ MA-373 BOARD (8/9) (SEE PAGE 4-27)
SW5V
ANGND
④ MA-373 BOARD (9/9) (SEE PAGE 4-30)
AUDIOCH1
AUDIOREC
AUDIOCH2
AFENV
ANGND
⑤ MA-373 BOARD (5/9) (SEE PAGE 4-21)
*R270
470:EXCEPT SE500
560:SE500
*R276
8.2k:SE500
10k:EXCEPT SE350/SE500
15k:SE350
① ② ③ ④ ⑤ ⑥

NO MARK:REC/PB MODE
R:REC MODE
P:PB MODE
*:IMPOSSIBLE TO MEASURE THE
VOLTAGE AT THE MARKED POINTS.

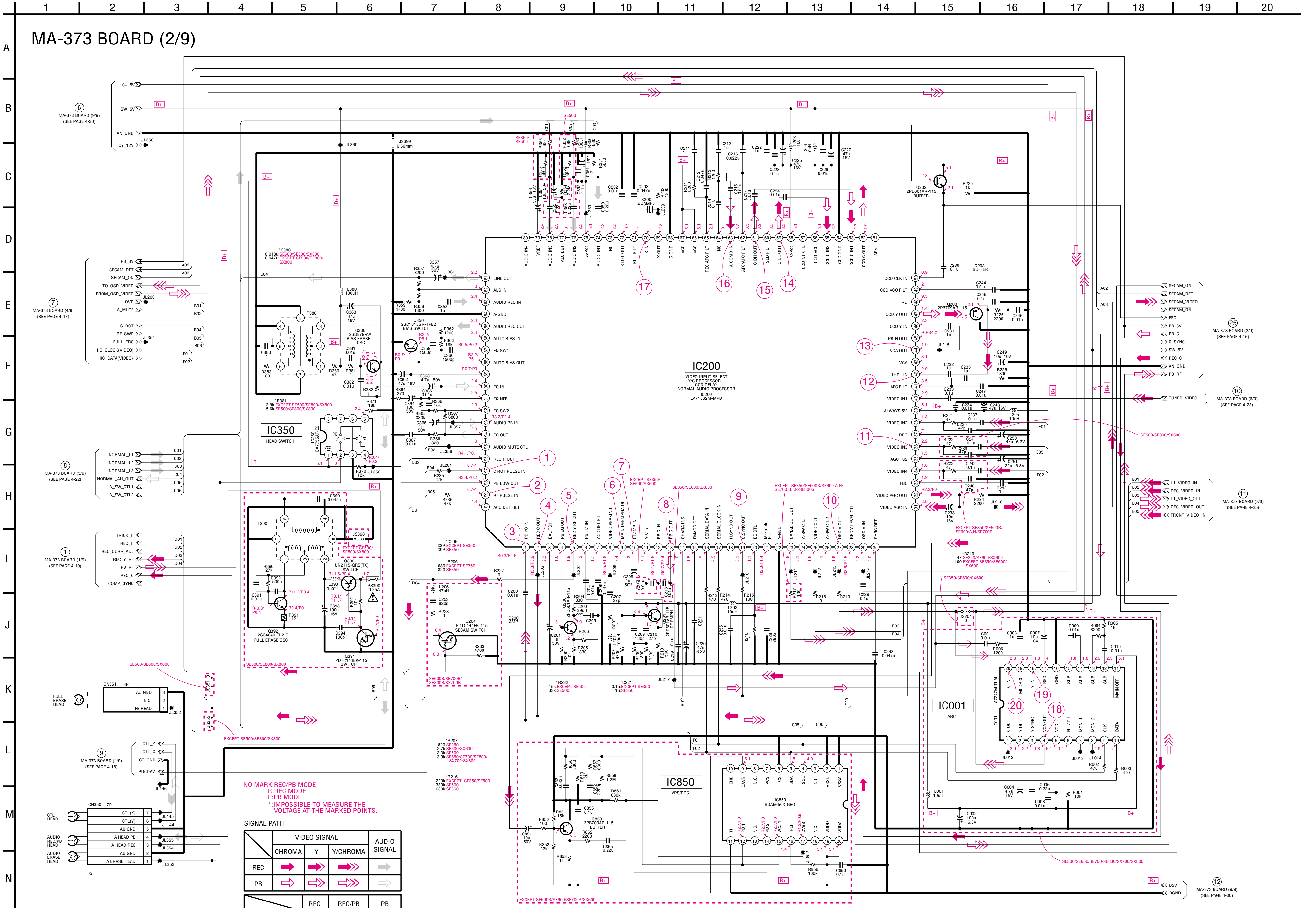
SIGNAL PATH

| | VIDEO SIGNAL | | | AUDIO SIGNAL |
|---|---|---|---|---|
| | CHROMA | Y | Y/CHROMA | |
| REC | ➡ | ⇉ | ⇶ | ➡ |
| PB | | | ⇶ | ⇨ |

# SLV-SE350/SE500/SE600/SE650/SE700/SE800/SX600/SX700/SX800

## MA-373 (VIDEO, AUDIO) SCHEMATIC DIAGRAM • See page 4-5 for printed wiring board.

– Ref. No.: MA-373 board; 1,000 series –



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
A B C D E F G H I J K L M N
MA-373 BOARD (2/9)
MA-373 BOARD (9/9) (SEE PAGE 4-30)
MA-373 BOARD (4/9) (SEE PAGE 4-17)
MA-373 BOARD (5/9) (SEE PAGE 4-22)
MA-373 BOARD (1/9) (SEE PAGE 4-10)
MA-373 BOARD (4/9) (SEE PAGE 4-18)
MA-373 BOARD (3/9) (SEE PAGE 4-16)
MA-373 BOARD (6/9) (SEE PAGE 4-23)
MA-373 BOARD (7/9) (SEE PAGE 4-25)
MA-373 BOARD (9/9) (SEE PAGE 4-30)
IC350 HEAD SWITCH
IC200 VIDEO INPUT SELECT Y/C PROCESSOR CCD DELAY NORMAL AUDIO PROCESSOR IC200 LA71562M-MPB
IC001 ARC
IC850 VPS/PDC
IC850 SDA5650X-GEG
Q380 2SD879-AA BIAS ERASE OSC
Q350 2SC1815GR-TPE2 BIAS SWITCH
Q390 UN2115-QRS(TX) SWITCH
Q392 2SC4040-TL2-Q FULL ERASE OSC
Q391 PDTC144EK-115 SWITCH
Q204 PDTC144EK-115 SECAM SWITCH
Q200 AMP
Q202 2PD601AR-115 BUFFER
Q203 2PB709AR-115
Q850 2PB709AR-115 BUFFER
T380
T390
FULL ERASE HEAD
CTL HEAD
AUDIO REC/PB HEAD
AUDIO ERASE HEAD
CN351 3P
CN350 7P
SE500/SE800/SX800
EXCEPT SE500/SE800/SX800
SE350/SE600/SX600
SE500/SE650/SE700/SE800/SX700/SX800
EXCEPT SE500R/SE600/SE700R/SX600

NO MARK:REC/PB MODE
R:REC MODE
P:PB MODE
*:IMPOSSIBLE TO MEASURE THE VOLTAGE AT THE MARKED POINTS.

SIGNAL PATH

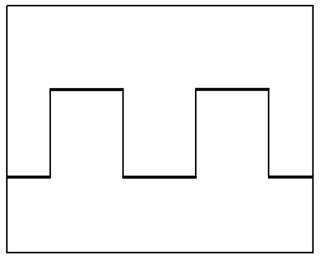
|  | VIDEO SIGNAL |  |  | AUDIO SIGNAL |
|---|---|---|---|---|
|  | CHROMA | Y | Y/CHROMA |  |
| REC | ➡ | ➡» | ➡»» | ➡ |
| PB | ⇨ | ⇨» | ⇨»» | ⇨ |

|  | REC | REC/PB | PB |
|---|---|---|---|
| Ref.signal | ➤ |  | ▷ |

**Note:** The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

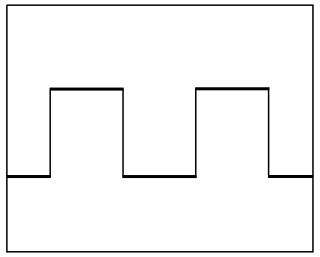
**• Waveforms**

❶ IC200 (97) PB



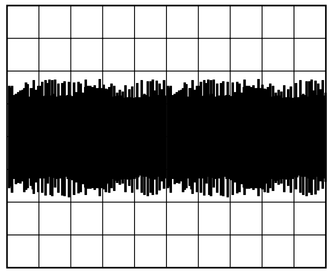
1.7 Vp-p (2 V)

❷ IC200 (99) PB



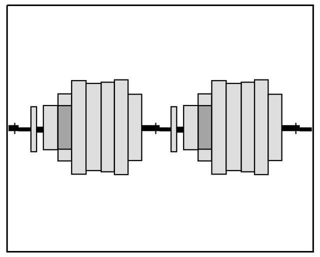
1.7 Vp-p (2 V)

❸ IC200 ① PB



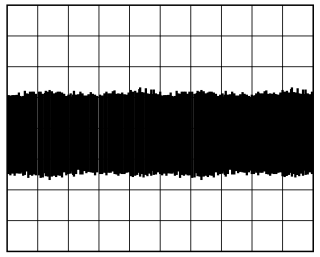
704 mVp-p (H)

❹ IC200 ② REC



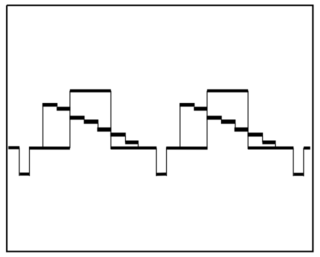
276 mVp-p (H)

❺ IC200 ⑤ REC/PB



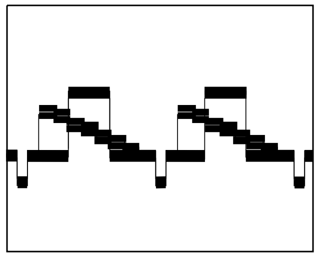
REC : 504 mVp-p (H)
PB : 320 mVp-p (H)

❻ IC200 ⑨ REC



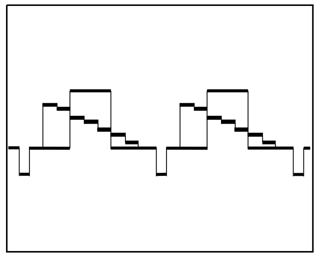
424 mVp-p (H)

❻ IC200 ⑨ PB



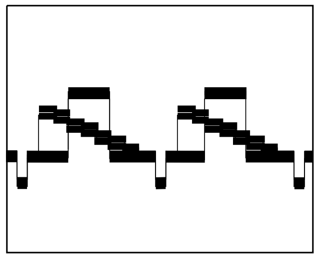
496 mVp-p (H)

❼ IC200 ⑩ REC



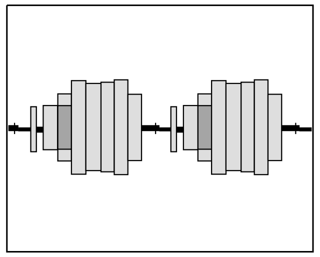
424 mVp-p (H)

❼ IC200 ⑩ PB



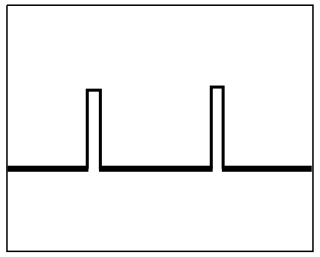
536 mVp-p (H)

❽ IC200 ⑬ PB



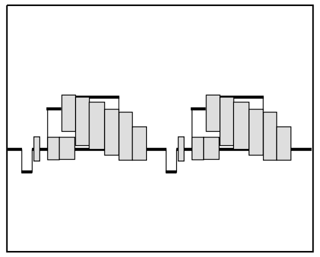
488 mVp-p (H)

❾ IC200 ⑲ REC/PB



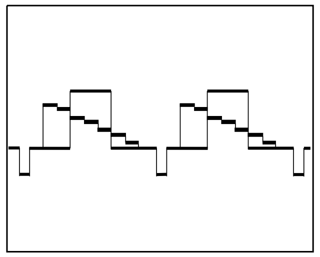
4.3 Vp-p (H)

❿ IC200 ㉗ REC



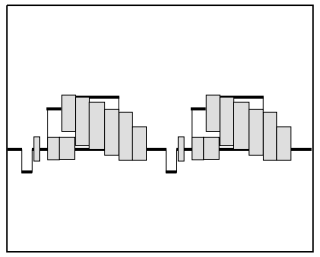
2 Vp-p (H)

❿ IC200 ㉗ PB



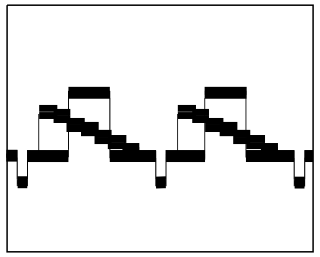
1.8 Vp-p (H)

⓫ IC200 ㊱ REC/PB



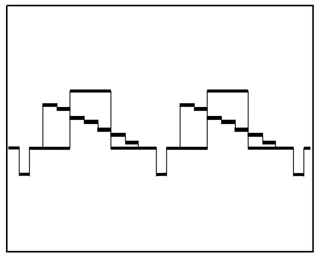
1.1 Vp-p (H)

⓬ IC200 ㊷ REC/PB



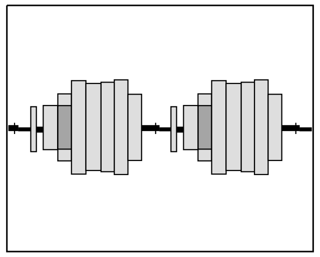
REC : 320 mVp-p (H)
PB : 368 mVp-p (H)

⓭ IC200 ㊹ REC/PB



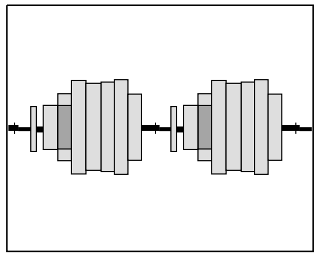
REC : 296 mVp-p (H)
PB : 336 mVp-p (H)

⓮ IC200 (59) REC/PB



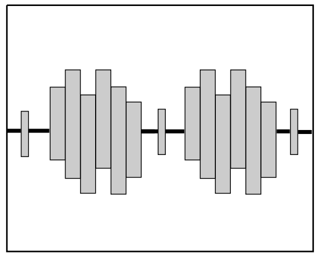
REC : 296 mVp-p (H)
PB : 324 mVp-p (H)

⓯ IC200 (61) REC/PB



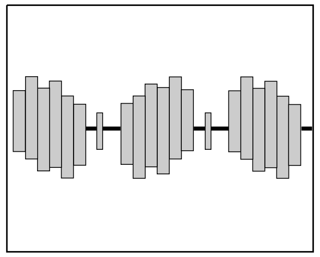
REC : 276 mVp-p (H)
PB : 288 mVp-p (H)

⓰ IC200 (63) REC



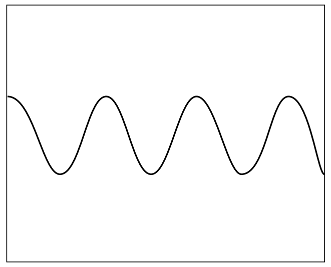
304 mVp-p (H)

⓰ IC200 (63) PB



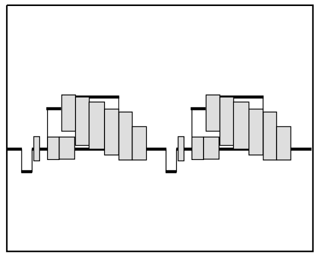
304 mVp-p (H)

⓱ IC200 (70) REC/PB



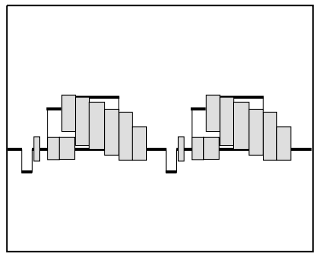
472 mVp-p (4.43 MHz)

⓲ IC001 ④ REC/PB



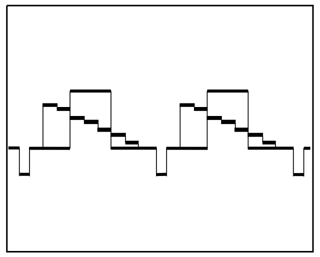
2 Vp-p (H)

⓳ IC001 ⑱ REC



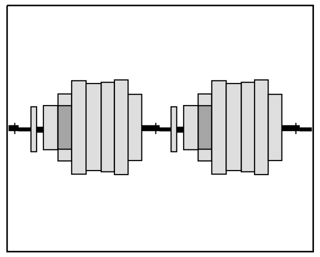
2 Vp-p (H)

⓳ IC001 ⑱ PB



1.8 Vp-p (H)

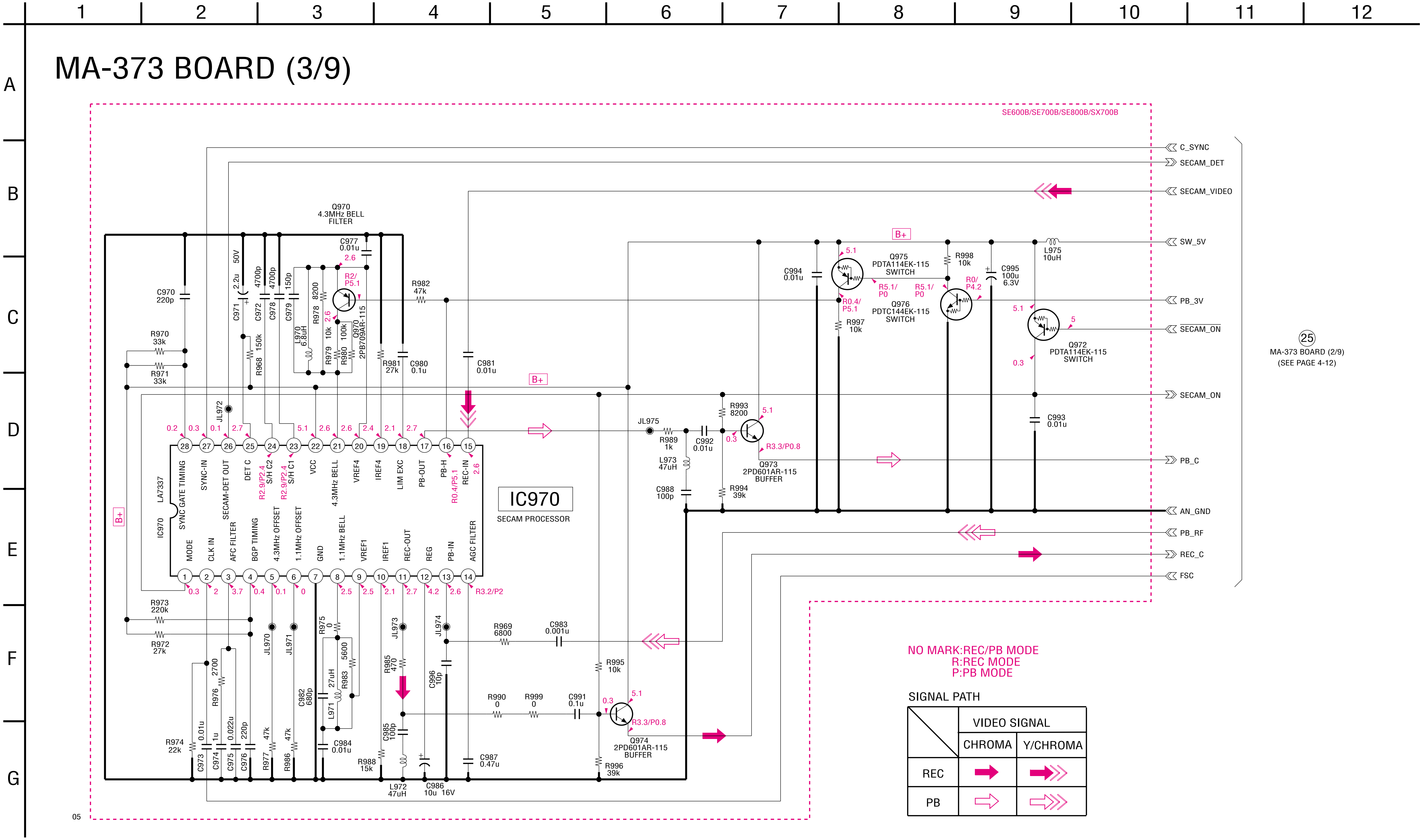
⓴ IC001 ⑳ PB



372 mVp-p (H)

**MA-373 (SECAM) SCHEMATIC DIAGRAM** • **See page 4-5 for printed wiring board.**

– Ref. No.: MA-373 board; 1,000 series –


1
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10
11
12
A
B
C
D
E
F
G
MA-373 BOARD (3/9)
SE600B/SE700B/SE800B/SX700B
C_SYNC
SECAM_DET
SECAM_VIDEO
SW_5V
PB_3V
SECAM_ON
SECAM_ON
PB_C
AN_GND
PB_RF
REC_C
FSC
25
MA-373 BOARD (2/9)
(SEE PAGE 4-12)
Q970
4.3MHz BELL
FILTER
C977
0.01u
C970
220p
R970
33k
R971
33k
C971
2.2u 50V
C972
4700p
C978
4700p
C979
150p
R968
150k
L970
6.8uH
R978
8200
R979
10k
R980
100k
Q970
2PB709AR-115
R981
27k
C980
0.1u
R982
47k
C981
0.01u
B+
JL972
IC970
LA7337
IC970
SECAM PROCESSOR
SYNC GATE TIMING
SYNC-IN
SECAM-DET OUT
DET C
S/H C2
S/H C1
VCC
4.3MHz BELL
VREF4
IREF4
LIM EXC
PB-OUT
PB-H
REC-IN
MODE
CLK IN
AFC FILTER
BGP TIMING
4.3MHz OFFSET
1.1MHz OFFSET
GND
1.1MHz BELL
VREF1
IREF1
REC-OUT
REG
PB-IN
AGC FILTER
R2.9/P2.4
R2.9/P2.4
R0.4/P5.1
R3.2/P2
R973
220k
R972
27k
R974
22k
C973
0.01u
C974
1u
C975
0.022u
C976
220p
R976
2700
R977
47k
R986
47k
JL970
JL971
R975
0
L971
27uH
R983
5600
C982
680p
C984
0.01u
JL973
R985
470
C985
100p
R988
15k
L972
47uH
C986
10u 16V
JL974
C996
10p
C987
0.47u
R969
6800
C983
0.001u
R990
0
R999
0
C991
0.1u
R995
10k
Q974
2PD601AR-115
BUFFER
R996
39k
R3.3/P0.8
JL975
R989
1k
C992
0.01u
L973
47uH
C988
100p
R993
8200
R994
39k
Q973
2PD601AR-115
BUFFER
R3.3/P0.8
C994
0.01u
Q975
PDTA114EK-115
SWITCH
R0.4/P5.1
R997
10k
R998
10k
Q976
PDTC144EK-115
SWITCH
R5.1/P0
R5.1/P0
R0/P4.2
C995
100u
6.3V
L975
10uH
Q972
PDTA114EK-115
SWITCH
C993
0.01u
05

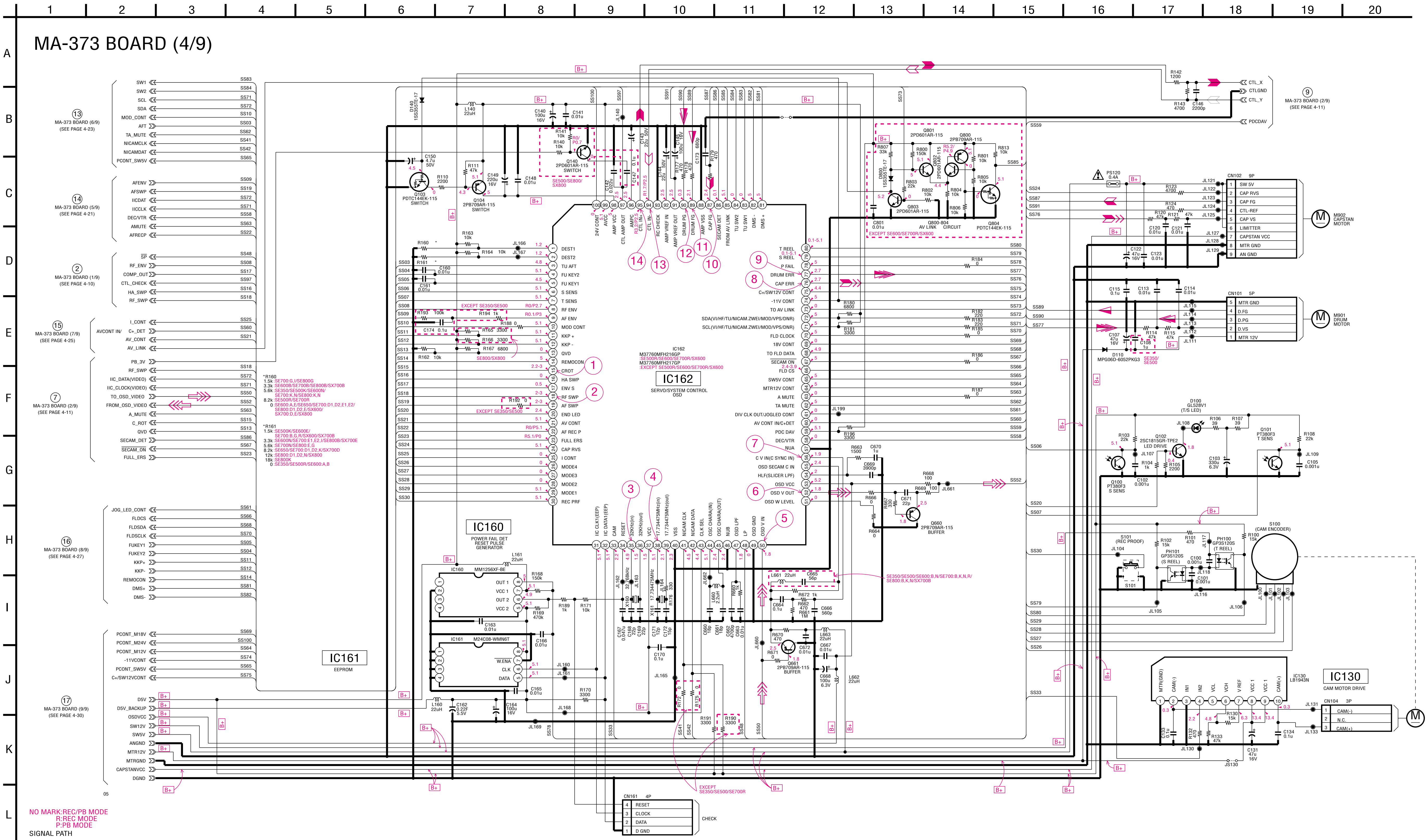
NO MARK:REC/PB MODE
R:REC MODE
P:PB MODE

SIGNAL PATH

| | VIDEO SIGNAL | |
|---|---|---|
| | CHROMA | Y/CHROMA |
| REC | ➡ | ➡⟫ |
| PB | ⇨ | ⇨⟫ |

## MA-373 (SERVO/SYSTEM CONTROL) SCHEMATIC DIAGRAM • See page 4-5 for printed wiring board and page 4-19 for waveforms.

– Ref. No.: MA-373 board; 1,000 series –


MA-373 BOARD (4/9)
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
A B C D E F G H I J K L M
⑬ MA-373 BOARD (6/9) (SEE PAGE 4-23)
⑭ MA-373 BOARD (5/9) (SEE PAGE 4-21)
② MA-373 BOARD (1/9) (SEE PAGE 4-10)
⑮ MA-373 BOARD (7/9) (SEE PAGE 4-25)
⑦ MA-373 BOARD (2/9) (SEE PAGE 4-11)
⑯ MA-373 BOARD (8/9) (SEE PAGE 4-27)
⑰ MA-373 BOARD (9/9) (SEE PAGE 4-30)
⑨ MA-373 BOARD (2/9) (SEE PAGE 4-11)
IC162 M37760MFH216GP SERVO/SYSTEM CONTROL OSD
IC160 POWER FAIL DET RESET PULSE GENERATOR
IC161 EEPROM
IC130 CAPSTAN MOTOR DRIVE
IC130 LB1943N
M902 CAPSTAN MOTOR
M901 DRUM MOTOR
M903 CAM MOTOR
CN102 9P
CN101 5P
CN104 3P
CN161 4P
4 RESET
3 CLOCK
2 DATA
1 D GND
CHECK
S100 (CAM ENCODER)
S101 (REC PROOF)
D100 GL528V1 (T/S LED)
Q101 PT380F3 T SENS
Q100 PT380F3 S SENS
Q102 2SC1815GR-TPE2 LED DRIVE
Q103 PDTC144EK-115 SWITCH
Q104 2PB709AR-115 SWITCH
Q140 2PD601AR-115 SWITCH
Q660 2PB709AR-115 BUFFER
Q661 2PB709AR-115 BUFFER
Q800 2PB709AR-115
Q801 2PD601AR-115
Q803 2PD601AR-115
Q804 PDTC144EK-115
Q800-804 AV LINK CIRCUIT
PS120 0.4A
EXCEPT SE600/SE700R/SX600
EXCEPT SE350/SE500
SE800/SX800
SE500/SE800/SX800
SE350/SE500
EXCEPT SE350/SE500/SE700R
SE350/SE500/SE600:B,N/SE700:B,K,N,R/SE800:B,K,N/SX700B
05

NO MARK:REC/PB MODE
R:REC MODE
P:PB MODE

SIGNAL PATH

| | REC | REC/PB | PB |
|---|---|---|---|
| Drum speed servo | | ▶ | |
| Drum phase servo | | ⮞ | |
| Drum servo(speed and phase) | | ⮞⮞ | |

| | REC | REC/PB | PB |
|---|---|---|---|
| Capstan speed servo | | ➧ | |
| Capstan servo(speed and phase) | | ➧» | |
| Ref.signal | ➤ | | ⇨ |

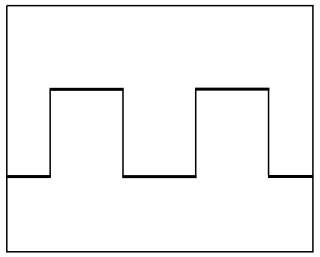
SIGNAL PATH

| | VIDEO SIGNAL<br>Y/CHROMA |
|---|---|
| PB | ⇨» |

**Note:** The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

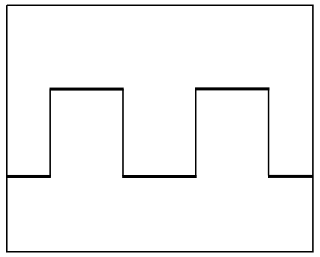
- **Waveforms**

❶ IC162 ⑮ REC/PB



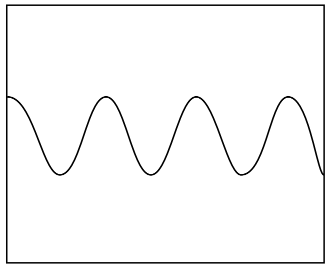
5.3 Vp-p (2 V)

❷ IC162 ⑱ REC/PB



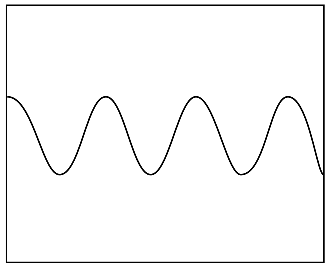
5.3 Vp-p (2 V)

❸ IC162 ㉟ REC/PB



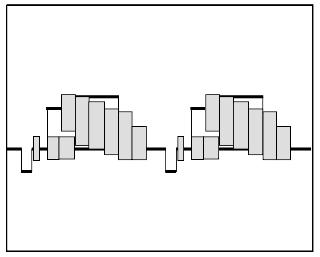
1.8 Vp-p (32.768 kHz)

❹ IC162 ㊳ REC/PB



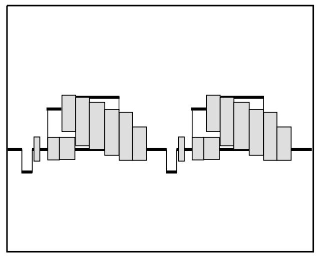
2.7 Vp-p (17.734475 MHz)

❺ IC162 ㊿ REC/PB



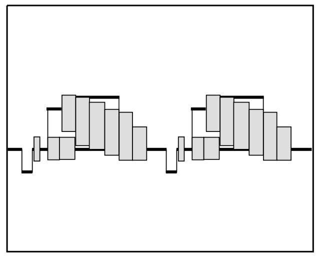
2 Vp-p (H)

❻ IC162 (52) REC/PB



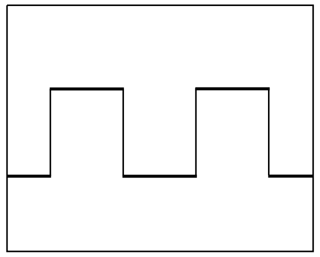
2 Vp-p (H)

❼ IC162 (56) REC/PB



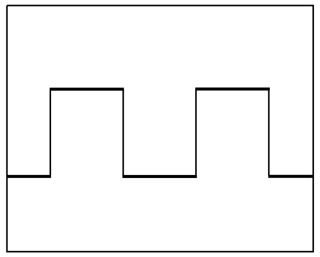
2 Vp-p (H)

❽ IC162 (76) REC/PB



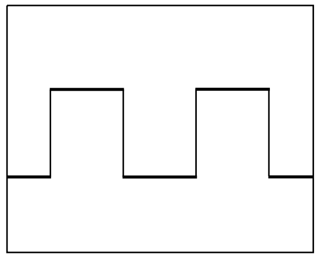
5.4 Vp-p (56 kHz)

❾ IC162 (77) REC/PB



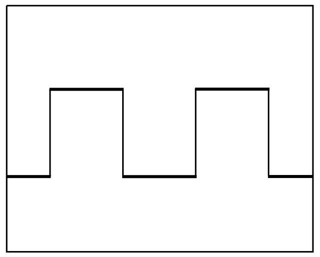
5.4 Vp-p (56 kHz)

❿ IC162 (87) REC/PB



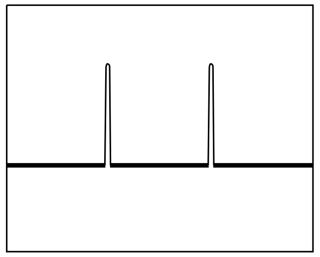
4.6 Vp-p (1 kHz)

⓫ IC162 (89) REC/PB



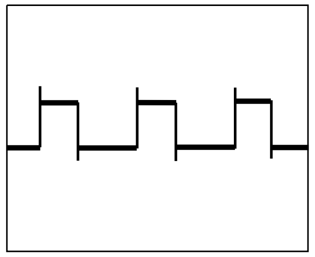
4.2 Vp-p (360 Hz)

⓬ IC162 (90) REC/PB



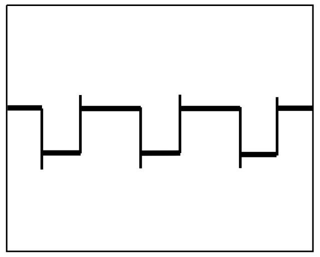
4.8 Vp-p (2 V)

⓭ IC162 (94) REC

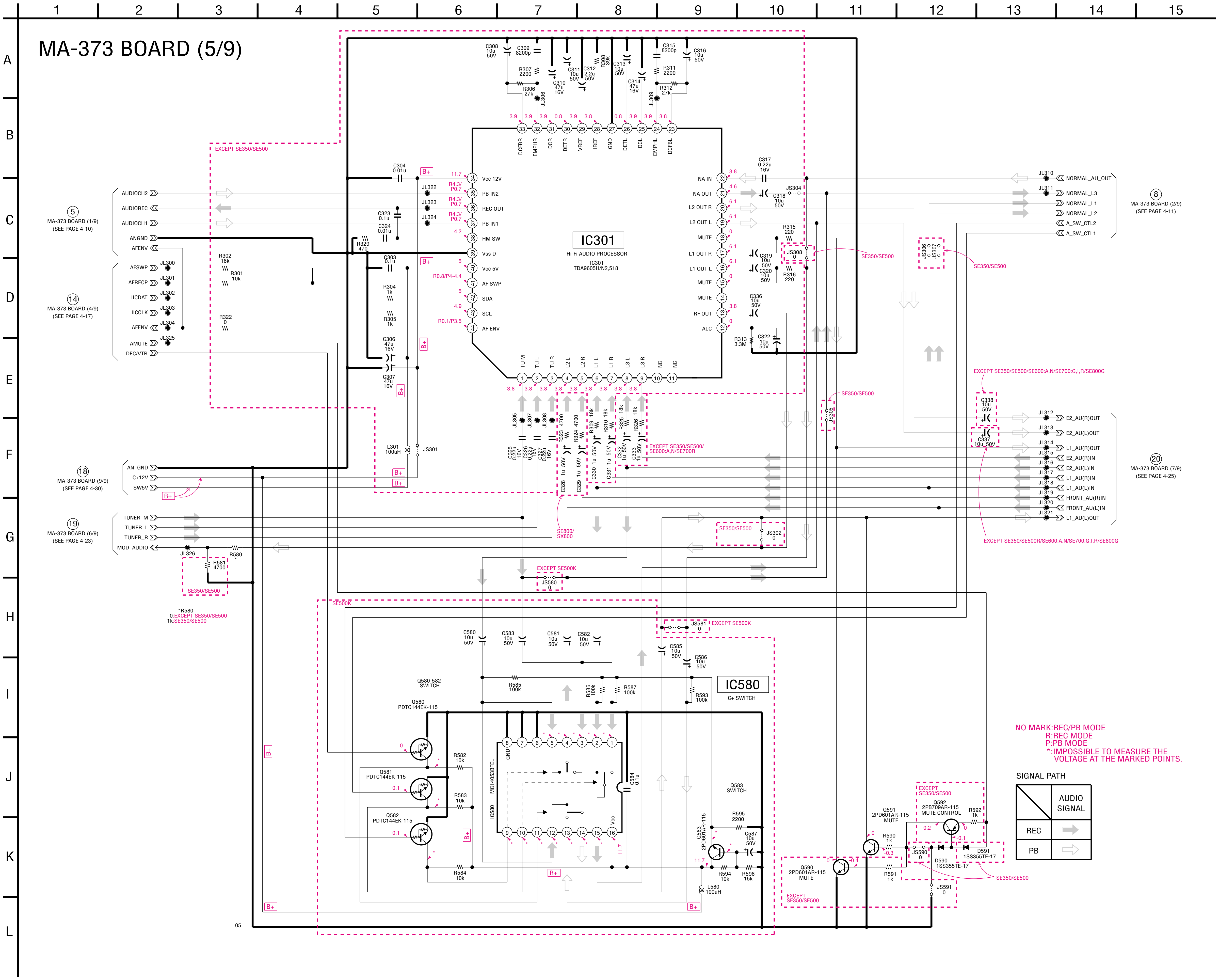


5 Vp-p (2 V)

⓮ IC200 (95) REC



5 Vp-p (2 V)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13
14
15
A
B
C
D
E
F
G
H
I
J
K
L
MA-373 BOARD (5/9)
IC301
Hi-Fi AUDIO PROCESSOR
IC301
TDA9605H/N2,518
IC580
C+ SWITCH
MC14053BFEL
Q580-582
SWITCH
Q580
PDTC144EK-115
Q581
PDTC144EK-115
Q582
PDTC144EK-115
Q583
SWITCH
Q583
2PD601AR-115
Q590
2PD601AR-115
MUTE
Q591
2PD601AR-115
MUTE
Q592
2PB709AR-115
MUTE CONTROL
D590
1SS355TE-17
D591
1SS355TE-17
⑤ MA-373 BOARD (1/9) (SEE PAGE 4-10)
⑭ MA-373 BOARD (4/9) (SEE PAGE 4-17)
⑱ MA-373 BOARD (9/9) (SEE PAGE 4-30)
⑲ MA-373 BOARD (6/9) (SEE PAGE 4-23)
⑧ MA-373 BOARD (2/9) (SEE PAGE 4-11)
⑳ MA-373 BOARD (7/9) (SEE PAGE 4-25)
AUDIOCH2
AUDIOREC
AUDIOCH1
ANGND
AFENV
AFSWP
AFRECP
IICDAT
IICCLK
AFENV
AMUTE
DEC/VTR
AN_GND
C+12V
SW5V
TUNER_M
TUNER_L
TUNER_R
MOD_AUDIO
NORMAL_AU_OUT
NORMAL_L3
NORMAL_L1
NORMAL_L2
A_SW_CTL2
A_SW_CTL1
E2_AU(R)OUT
E2_AU(L)OUT
L1_AU(R)OUT
E2_AU(R)IN
E2_AU(L)IN
L1_AU(R)IN
L1_AU(L)IN
FRONT_AU(R)IN
FRONT_AU(L)IN
L1_AU(L)OUT
Vcc 12V
PB IN2
REC OUT
PB IN1
HM SW
Vss D
Vcc 5V
AF SWP
SDA
SCL
AF ENV
NA IN
NA OUT
L2 OUT R
L2 OUT L
MUTE
L1 OUT R
L1 OUT L
MUTE
MUTE
RF OUT
ALC
DCFBR
EMPHR
DCR
DETR
VREF
IREF
GND
DETL
DCL
EMPHL
DCFBL
TU M
TU L
TU R
L2 L
L2 R
L1 L
L1 R
L3 L
L3 R
NC
NC
EXCEPT SE350/SE500
SE350/SE500
SE500K
EXCEPT SE500K
SE800/SX800
EXCEPT SE350/SE500/SE600:A,N/SE700:G,I,R/SE800G
EXCEPT SE350/SE500R/SE600:A,N/SE700:G,I,R/SE800G
EXCEPT SE350/SE500/SE600:A,N/SE700R
*R580
0:EXCEPT SE350/SE500
1k:SE350/SE500
B+
05

NO MARK:REC/PB MODE
R:REC MODE
P:PB MODE
*:IMPOSSIBLE TO MEASURE THE VOLTAGE AT THE MARKED POINTS.

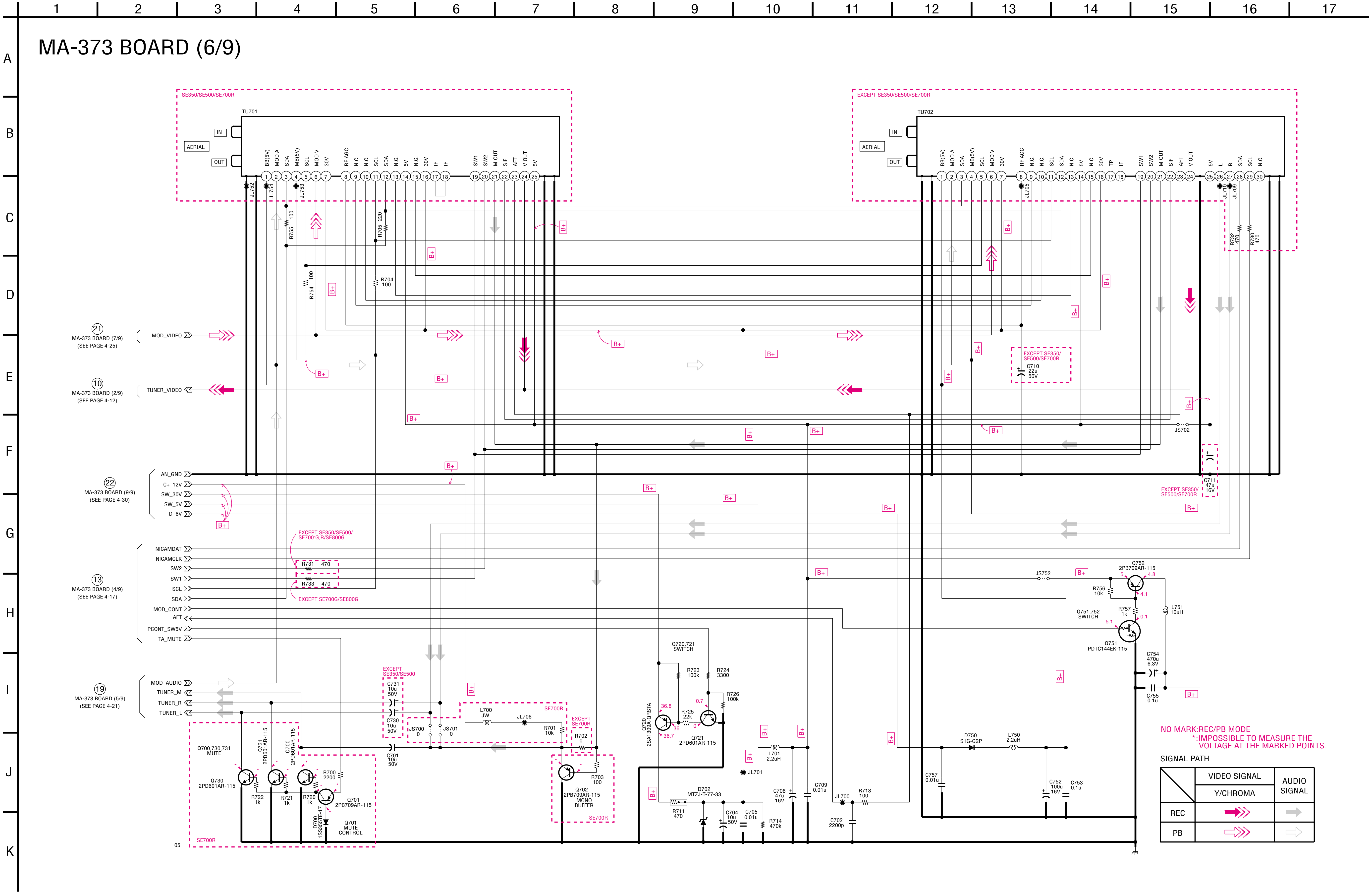
SIGNAL PATH

| | AUDIO SIGNAL |
|---|---|
| REC | ➡ |
| PB | ⇨ |

## MA-373 (TUNER) SCHEMATIC DIAGRAM • See page 4-5 for printed wiring board.

– Ref. No.: MA-373 board; 1,000 series –

# MA-373 BOARD (6/9)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11
12
13
14
15
16
17
A
B
C
D
E
F
G
H
I
J
K
SE350/SE500/SE700R
TU701
IN
AERIAL
OUT
BB(5V)
MOD A
SDA
MB(5V)
SCL
MOD V
30V
RF AGC
N.C.
N.C.
SCL
SDA
N.C.
5V
N.C.
30V
IF
IF
SW1
SW2
M OUT
SIF
AFT
V OUT
5V
JL752
JL754
JL753
R755 100
R705 220
R754 100
R704 100
B+
EXCEPT SE350/SE500/SE700R
TU702
IN
AERIAL
OUT
BB(5V)
MOD A
SDA
MB(5V)
SCL
MOD V
30V
RF AGC
N.C.
N.C.
SCL
SDA
N.C.
5V
N.C.
30V
TP
IF
SW1
SW2
M OUT
SIF
AFT
V OUT
5V
L
R
SDA
SCL
N.C.
JL705
JL710
JL709
R732 470
R730 470
EXCEPT SE350/SE500/SE700R
C710 22u 50V
JS702
C711 47u 16V
EXCEPT SE350/SE500/SE700R
㉑ MA-373 BOARD (7/9) (SEE PAGE 4-25)
MOD_VIDEO
⑩ MA-373 BOARD (2/9) (SEE PAGE 4-12)
TUNER_VIDEO
㉒ MA-373 BOARD (9/9) (SEE PAGE 4-30)
AN_GND
C+_12V
SW_30V
SW_5V
D_6V
⑬ MA-373 BOARD (4/9) (SEE PAGE 4-17)
NICAMDAT
NICAMCLK
SW2
SW1
SCL
SDA
MOD_CONT
AFT
PCONT_SW5V
TA_MUTE
EXCEPT SE350/SE500/SE700:G,R/SE800G
R731 470
R733 470
EXCEPT SE700G/SE800G
⑲ MA-373 BOARD (5/9) (SEE PAGE 4-21)
MOD_AUDIO
TUNER_M
TUNER_R
TUNER_L
Q700,730,731 MUTE
Q731 2PD601AR-115
Q700 2PD601AR-115
Q730 2PD601AR-115
R722 1k
R721 1k
R720 1k
R700 2200
Q701 2PB709AR-115
D700 1SS355TE-17
Q701 MUTE CONTROL
SE700R
05
EXCEPT SE350/SE500
C731 10u 50V
C730 10u 50V
C701 10u 50V
JS700 0
JS701 0
L700 JW
JL706
SE700R
R701 10k
EXCEPT SE700R
R702 0
R703 100
Q702 2PB709AR-115 MONO BUFFER
SE700R
Q720,721 SWITCH
R723 100k
R724 3300
R726 100k
Q720 2SA1309A-QRSTA
36.8
36
36.7
R725 22k
0.7
0
Q721 2PD601AR-115
D702 MTZJ-T-77-33
R711 470
C704 10u 50V
C705 0.01u
R714 470k
JL701
L701 2.2uH
C708 47u 16V
C709 0.01u
JL700
R713 100
C702 2200p
JS752
Q752 2PB709AR-115
5
4.8
4.1
R756 10k
Q751,752 SWITCH
R757 1k
0.1
5.1
Q751 PDTC144EK-115
L751 10uH
C754 470u 6.3V
C755 0.1u
D750 S1G-G2P
L750 2.2uH
C757 0.01u
C752 100u 16V
C753 0.1u

NO MARK:REC/PB MODE

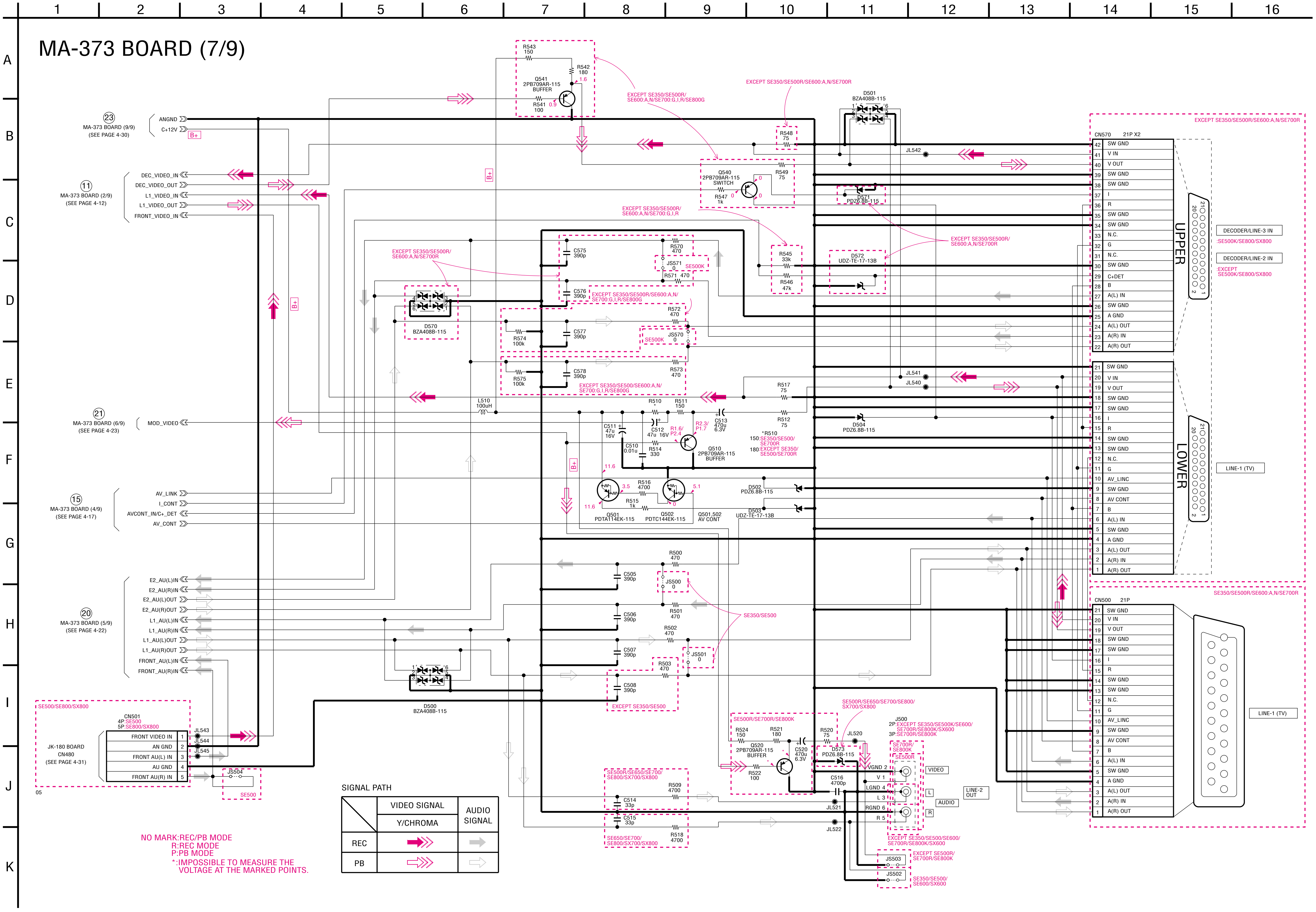
*:IMPOSSIBLE TO MEASURE THE VOLTAGE AT THE MARKED POINTS.

SIGNAL PATH

|  | VIDEO SIGNAL<br>Y/CHROMA | AUDIO SIGNAL |
|---|---|---|
| REC | ➡≫ | ➡ |
| PB | ⇨≫ | ⇨ |

## MA-373 (I/O) SCHEMATIC DIAGRAM • See page 4-5 for printed wiring board.

– Ref. No.: MA-373 board; 1,000 series –


1
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9
10
11
12
13
14
15
16
A
B
C
D
E
F
G
H
I
J
K
MA-373 BOARD (7/9)
23
MA-373 BOARD (9/9)
(SEE PAGE 4-30)
ANGND
C+12V
B+
11
MA-373 BOARD (2/9)
(SEE PAGE 4-12)
DEC_VIDEO_IN
DEC_VIDEO_OUT
L1_VIDEO_IN
L1_VIDEO_OUT
FRONT_VIDEO_IN
21
MA-373 BOARD (6/9)
(SEE PAGE 4-23)
MOD_VIDEO
15
MA-373 BOARD (4/9)
(SEE PAGE 4-17)
AV_LINK
I_CONT
AVCONT_IN/C+_DET
AV_CONT
20
MA-373 BOARD (5/9)
(SEE PAGE 4-22)
E2_AU(L)IN
E2_AU(R)IN
E2_AU(L)OUT
E2_AU(R)OUT
L1_AU(L)IN
L1_AU(R)IN
L1_AU(L)OUT
L1_AU(R)OUT
FRONT_AU(L)IN
FRONT_AU(R)IN
SE500/SE800/SX800
CN501
4P:SE500
5P:SE800/SX800
JK-180 BOARD
CN480
(SEE PAGE 4-31)
FRONT VIDEO IN
AN GND
FRONT AU(L) IN
AU GND
FRONT AU(R) IN
JL543
JL544
JL545
JS504
SE500
05
R543 150
R542 180
1.6
Q541
2PB709AR-115
BUFFER
R541 100
0.9
EXCEPT SE350/SE500R/SE600:A,N/SE700:G,I,R/SE800G
EXCEPT SE350/SE500R/SE600:A,N/SE700R
D501
BZA408B-115
R548 75
JL542
Q540
2PB709AR-115
SWITCH
R547 1k
R549 75
D571
PDZ6.8B-115
EXCEPT SE350/SE500R/SE600:A,N/SE700:G,I,R
R545 33k
R546 47k
D572
UDZ-TE-17-13B
EXCEPT SE350/SE500R/SE600:A,N/SE700R
C575 390p
R570 470
JS571 0
SE500K
R571 470
C576 390p
EXCEPT SE350/SE500R/SE600:A,N/SE700:G,I,R/SE800G
EXCEPT SE350/SE500R/SE600:A,N/SE700R
D570
BZA408B-115
R572 470
R574 100k
C577 390p
JS570 0
SE500K
R575 100k
C578 390p
R573 470
EXCEPT SE350/SE500/SE600:A,N/SE700:G,I,R/SE800G
L510 100uH
R510 *
R511 150
C513 470u 6.3V
C511 47u 16V
C512 47u 16V
R1.6/P2.4
R2.3/P1.7
C510 0.01u
R514 330
Q510
2PB709AR-115
BUFFER
R512 75
*R510
150:SE350/SE500/SE700R
180:EXCEPT SE350/SE500/SE700R
R517 75
JL541
JL540
D504
PDZ6.8B-115
11.6
3.5
R516 4700
5.1
R515 1k
11.6
0
Q501
PDTA114EK-115
Q502
PDTC144EK-115
Q501,502
AV CONT
D502
PDZ6.8B-115
D503
UDZ-TE-17-13B
R500 470
C505 390p
JS500 0
R501 470
SE350/SE500
C506 390p
R502 470
C507 390p
JS501 0
R503 470
C508 390p
EXCEPT SE350/SE500
D500
BZA408B-115
SE500R/SE700R/SE800K
R524 150
R521 180
R520 75
Q520
2PB709AR-115
BUFFER
R522 100
C520 470u 6.3V
JL520
D573
PDZ6.8B-115
SE500R/SE650/SE700/SE800/SX700/SX800
J500
2P:EXCEPT SE350/SE500K/SE600/SE700R/SE800K/SX600
3P:SE700R/SE800K
SE700R/SE800K
SE500R
VGND 2
V 1
LGND 4
L 3
RGND 6
R 5
VIDEO
L
AUDIO
R
LINE-2 OUT
C516 4700p
JL521
JL522
SE500R/SE650/SE700/SE800/SX700/SX800
R509 4700
C514 33p
C515 33p
R518 4700
SE650/SE700/SE800/SX700/SX800
EXCEPT SE350/SE500/SE600/SE700R/SE800K/SX600
JS503
EXCEPT SE500R/SE700R/SE800K
JS502
SE350/SE500/SE600/SX600
EXCEPT SE350/SE500R/SE600:A,N/SE700R
CN570 21P X2
42 SW GND
41 V IN
40 V OUT
39 SW GND
38 SW GND
37 I
36 R
35 SW GND
34 SW GND
33 N.C.
32 G
31 N.C.
30 SW GND
29 C+DET
28 B
27 A(L) IN
26 SW GND
25 A GND
24 A(L) OUT
23 A(R) IN
22 A(R) OUT
21 SW GND
20 V IN
19 V OUT
18 SW GND
17 SW GND
16 I
15 R
14 SW GND
13 SW GND
12 N.C.
11 G
10 AV_LINC
9 SW GND
8 AV CONT
7 B
6 A(L) IN
5 SW GND
4 A GND
3 A(L) OUT
2 A(R) IN
1 A(R) OUT
UPPER
LOWER
DECODER/LINE-3 IN
:SE500K/SE800/SX800
DECODER/LINE-2 IN
:EXCEPT SE500K/SE800/SX800
LINE-1 (TV)
SE350/SE500R/SE600:A,N/SE700R
CN500 21P
21 SW GND
20 V IN
19 V OUT
18 SW GND
17 SW GND
16 I
15 R
14 SW GND
13 SW GND
12 N.C.
11 G
10 AV_LINC
9 SW GND
8 AV CONT
7 B
6 A(L) IN
5 SW GND
4 A GND
3 A(L) OUT
2 A(R) IN
1 A(R) OUT
LINE-1 (TV)

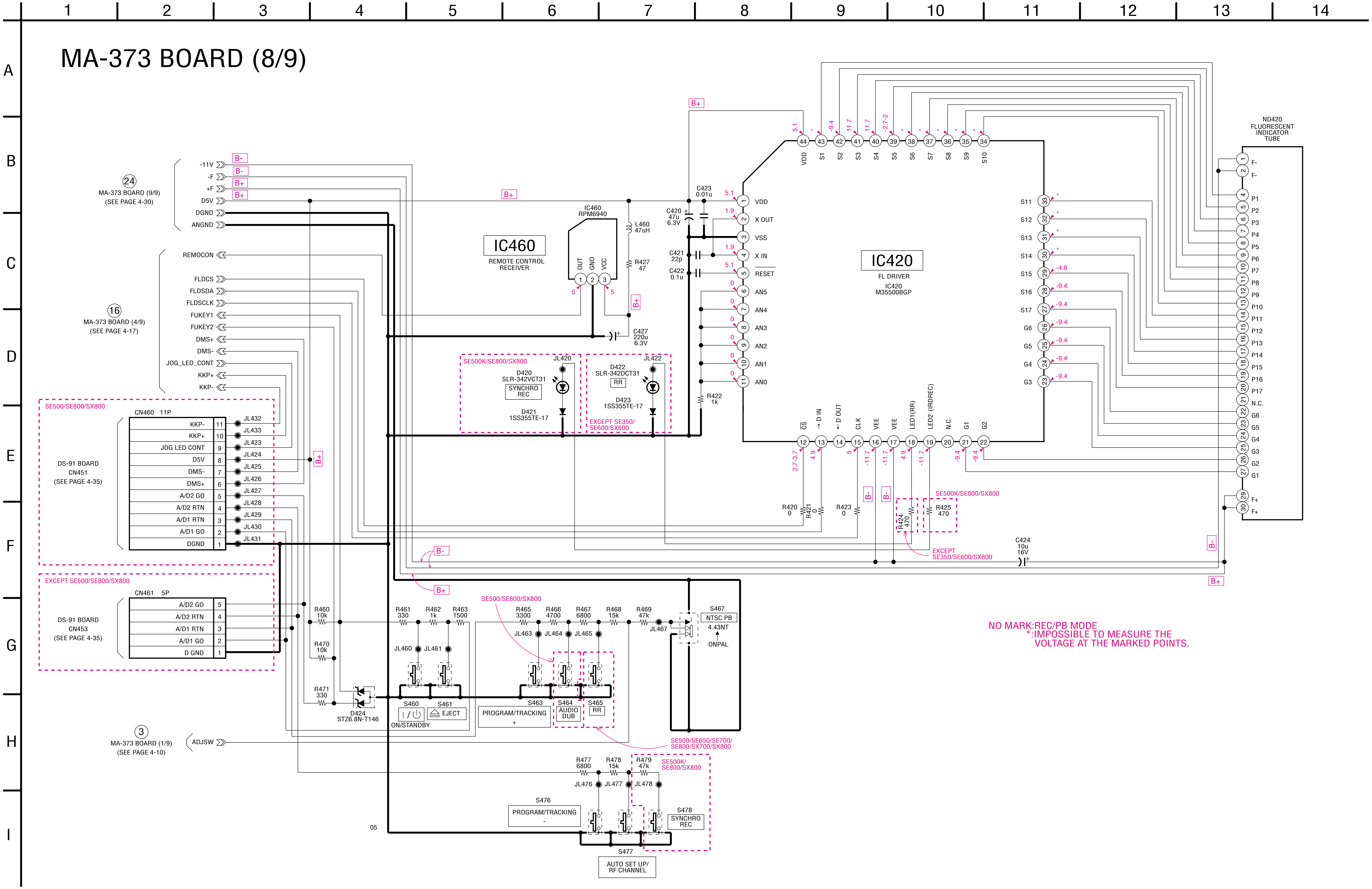
SIGNAL PATH

| | VIDEO SIGNAL | AUDIO SIGNAL |
|---|---|---|
| | Y/CHROMA | |
| REC | ➡ | ➡ |
| PB | ⇨ | ⇨ |

NO MARK:REC/PB MODE
R:REC MODE
P:PB MODE
*:IMPOSSIBLE TO MEASURE THE VOLTAGE AT THE MARKED POINTS.

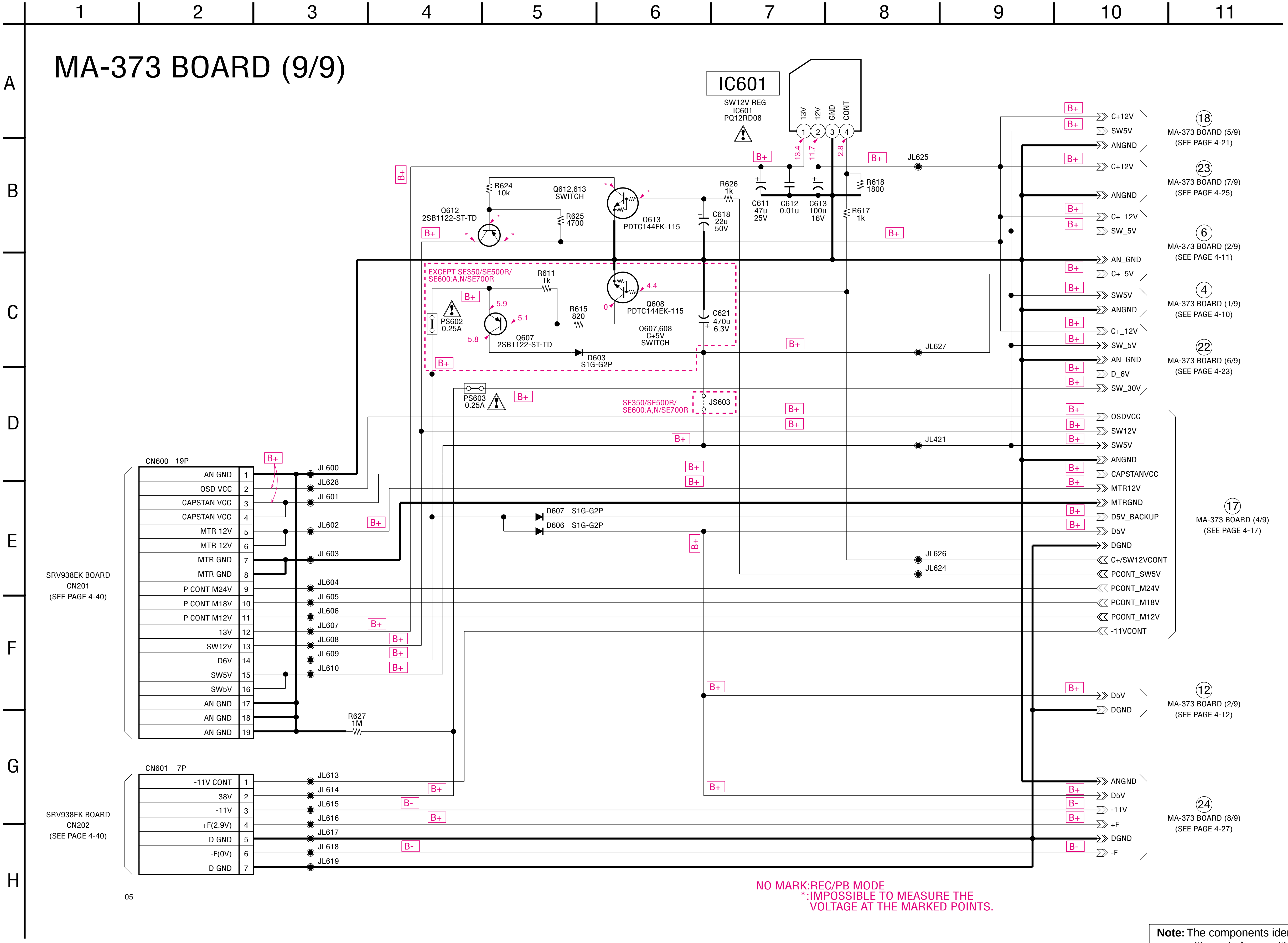
**MA-373 (MODE CONTROL) SCHEMATIC DIAGRAM** **• See page 4-5 for printed wiring board.**

– Ref. No.: MA-373 board; 1,000 series –


MA-373 BOARD (8/9)
1 2 3 4 5 6 7 8 9 10 11 12 13 14
A B C D E F G H I
MA-373 BOARD (9/9) (SEE PAGE 4-30)
-11V -F +F D5V DGND ANGND
B- B- B+ B+
MA-373 BOARD (4/9) (SEE PAGE 4-17)
REMOCON FLDCS FLDSDA FLDSCLK FUKEY1 FUKEY2 DMS+ DMS- JOG_LED_CONT KKP+ KKP-
SE500/SE800/SX800
CN460 11P
DS-91 BOARD CN451 (SEE PAGE 4-35)
KKP- KKP+ JOG LED CONT D5V DMS- DMS+ A/D2 GO A/D2 RTN A/D1 RTN A/D1 GO DGND
JL432 JL433 JL423 JL424 JL425 JL426 JL427 JL428 JL429 JL430 JL431
EXCEPT SE500/SE800/SX800
CN461 5P
DS-91 BOARD CN453 (SEE PAGE 4-35)
A/D2 GO A/D2 RTN A/D1 RTN A/D1 GO D GND
MA-373 BOARD (1/9) (SEE PAGE 4-10)
ADJSW
IC460 RPM6940
IC460 REMOTE CONTROL RECEIVER
OUT GND VCC
L460 47uH
R427 47
C427 220u 6.3V
SE500K/SE800/SX800
JL420
D420 SLR-342VCT31
SYNCHRO REC
D421 1SS355TE-17
JL422
D422 SLR-342DCT31
RR
D423 1SS355TE-17
EXCEPT SE350/SE600/SX600
C423 0.01u
C420 47u 6.3V
C421 22p
C422 0.1u
R422 1k
IC420 FL DRIVER
IC420 M35500BGP
VDD X OUT VSS X IN RESET AN5 AN4 AN3 AN2 AN1 AN0
VDD S1 S2 S3 S4 S5 S6 S7 S8 S9 S10
S11 S12 S13 S14 S15 S16 S17 G6 G5 G4 G3
CS → D IN ← D OUT CLK VEE VEE LED1(RR) LED2 (IRDREC) N.C. G1 G2
R420 0
R421 0
R423 0
R424 470
R425 470
SE500K/SE800/SX800
EXCEPT SE350/SE600/SX600
C424 10u 16V
ND420 FLUORESCENT INDICATOR TUBE
F- F- P1 P2 P3 P4 P5 P6 P7 P8 P9 P10 P11 P12 P13 P14 P15 P16 P17 N.C. G6 G5 G4 G3 G2 G1 F+ F+
R460 10k
R470 10k
R471 330
D424 STZ6.8N-T146
R461 330
R462 1k
R463 1500
JL460 JL461
S460 I / ⏻ ON/STANDBY
S461 EJECT
SE500/SE800/SX800
R465 3300
R466 4700
R467 6800
R468 15k
R469 47k
JL463 JL464 JL465 JL467
S463 PROGRAM/TRACKING +
S464 AUDIO DUB
S465 RR
S467 NTSC PB 4.43NT ONPAL
SE500/SE650/SE700/SE800/SX700/SX800
R477 6800
R478 15k
R479 47k
SE500K/SE800/SX800
JL476 JL477 JL478
S476 PROGRAM/TRACKING -
S477 AUTO SET UP/RF CHANNEL
S478 SYNCHRO REC
05

NO MARK:REC/PB MODE
*:IMPOSSIBLE TO MEASURE THE VOLTAGE AT THE MARKED POINTS.

**MA-373 (POWER SUPPLY) SCHEMATIC DIAGRAM** **• See page 4-5 for printed wiring board and page 4-19 for waveforms.**
– Ref. No.: MA-373 board; 1,000 series –


1
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3
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5
6
7
8
9
10
11
A
B
C
D
E
F
G
H
MA-373 BOARD (9/9)
IC601
SW12V REG
IC601
PQ12RD08
13V
12V
GND
CONT
1
2
3
4
13.4
11.7
2.8
B+
B-
JL625
R618
1800
R617
1k
R626
1k
C611
47u
25V
C612
0.01u
C613
100u
16V
R624
10k
Q612,613
SWITCH
Q612
2SB1122-ST-TD
R625
4700
Q613
PDTC144EK-115
C618
22u
50V
EXCEPT SE350/SE500R/
SE600:A,N/SE700R
R611
1k
4.4
5.9
5.1
0
5.8
PS602
0.25A
R615
820
Q608
PDTC144EK-115
C621
470u
6.3V
Q607,608
C+5V
SWITCH
Q607
2SB1122-ST-TD
D603
S1G-G2P
JL627
PS603
0.25A
SE350/SE500R/
SE600:A,N/SE700R
JS603
JL421
CN600 19P
AN GND
OSD VCC
CAPSTAN VCC
CAPSTAN VCC
MTR 12V
MTR 12V
MTR GND
MTR GND
P CONT M24V
P CONT M18V
P CONT M12V
13V
SW12V
D6V
SW5V
SW5V
AN GND
AN GND
AN GND
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
SRV938EK BOARD
CN201
(SEE PAGE 4-40)
JL600
JL628
JL601
JL602
JL603
JL604
JL605
JL606
JL607
JL608
JL609
JL610
D607 S1G-G2P
D606 S1G-G2P
JL626
JL624
R627
1M
CN601 7P
-11V CONT
38V
-11V
+F(2.9V)
D GND
-F(0V)
D GND
1
2
3
4
5
6
7
SRV938EK BOARD
CN202
(SEE PAGE 4-40)
JL613
JL614
JL615
JL616
JL617
JL618
JL619
05
C+12V
SW5V
ANGND
⑱
MA-373 BOARD (5/9)
(SEE PAGE 4-21)
C+12V
ANGND
㉓
MA-373 BOARD (7/9)
(SEE PAGE 4-25)
C+_12V
SW_5V
AN_GND
⑥
MA-373 BOARD (2/9)
(SEE PAGE 4-11)
C+_5V
SW5V
ANGND
④
MA-373 BOARD (1/9)
(SEE PAGE 4-10)
C+_12V
SW_5V
AN_GND
D_6V
SW_30V
㉒
MA-373 BOARD (6/9)
(SEE PAGE 4-23)
OSDVCC
SW12V
SW5V
ANGND
CAPSTANVCC
MTR12V
MTRGND
D5V_BACKUP
D5V
DGND
C+/SW12VCONT
PCONT_SW5V
PCONT_M24V
PCONT_M18V
PCONT_M12V
-11VCONT
⑰
MA-373 BOARD (4/9)
(SEE PAGE 4-17)
D5V
DGND
⑫
MA-373 BOARD (2/9)
(SEE PAGE 4-12)
ANGND
D5V
-11V
+F
DGND
-F
㉔
MA-373 BOARD (8/9)
(SEE PAGE 4-27)

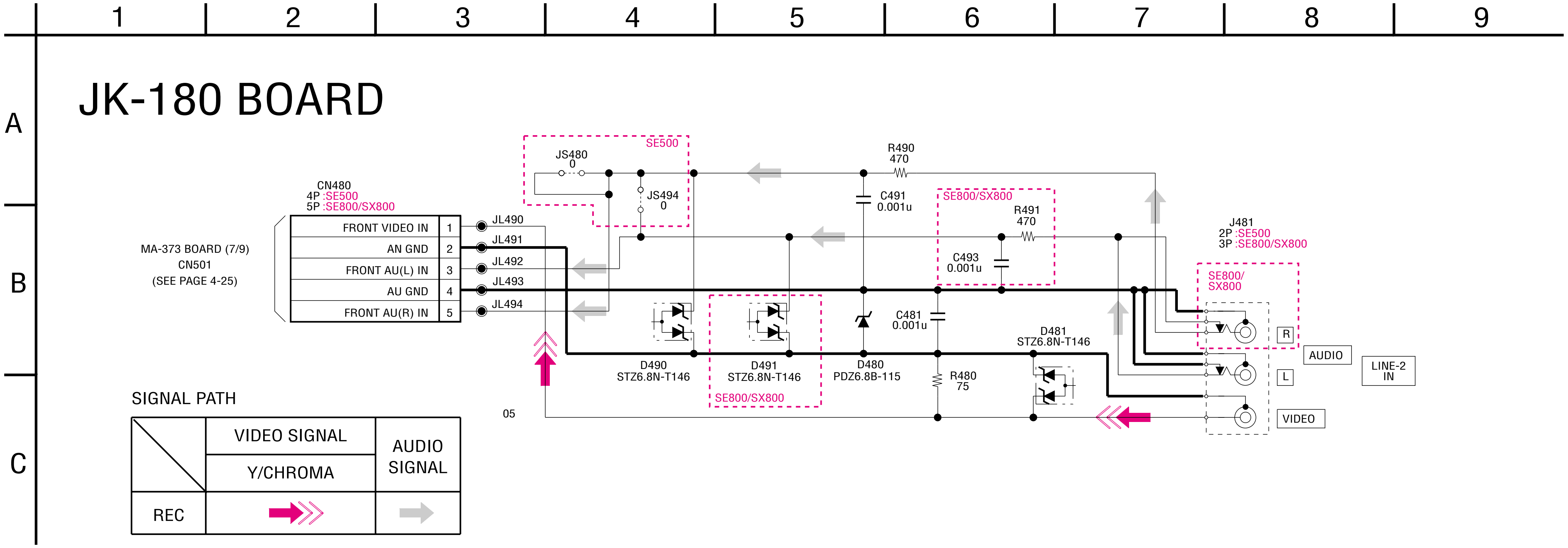
NO MARK:REC/PB MODE
*:IMPOSSIBLE TO MEASURE THE
VOLTAGE AT THE MARKED POINTS.

**Note:** The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

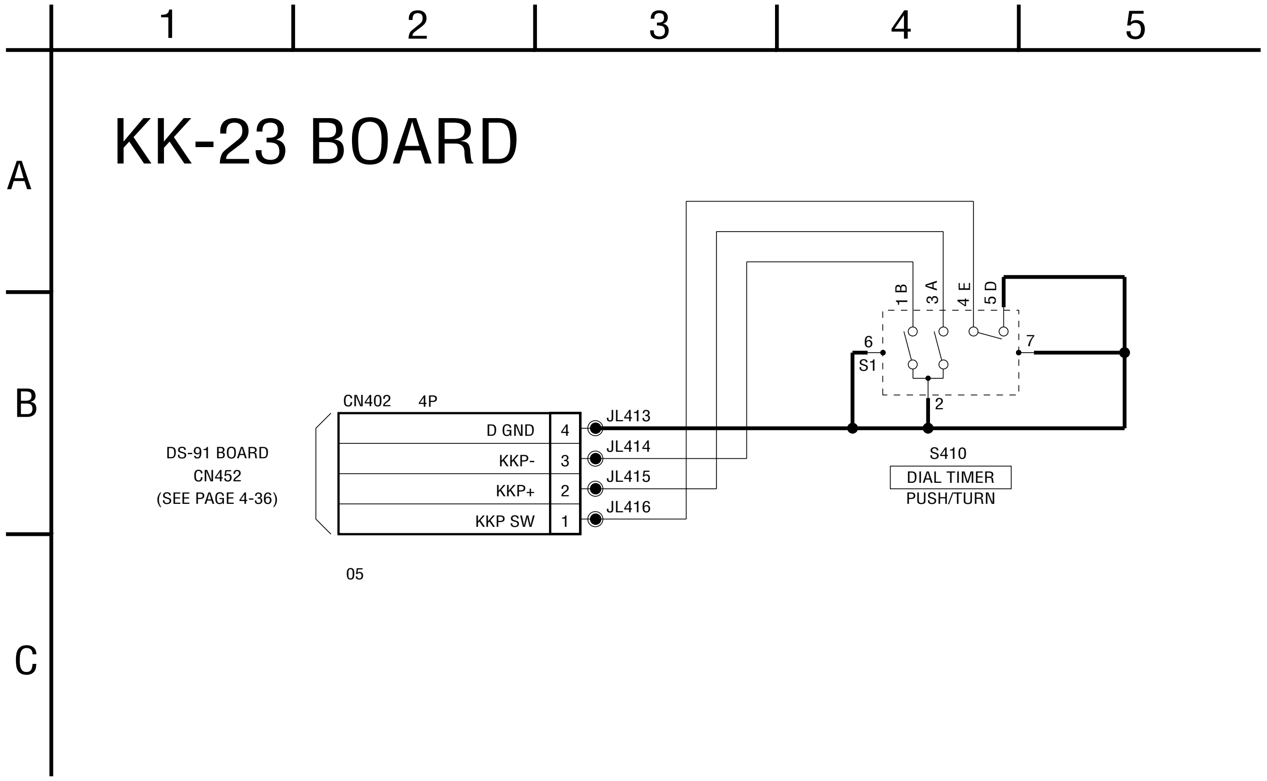
## JK-180 (FRONT IN), KK-23 (DIAL TIMER) SCHEMATIC DIAGRAMS

– Ref. No.:JK-180 board, KK-23 board; 1,000 series –

**–SLV-SE500/SE800/SX800 –**


1
2
3
4
5
6
7
8
9
A
B
C
JK-180 BOARD
SE500
JS480
0
JS494
0
R490
470
C491
0.001u
SE800/SX800
R491
470
C493
0.001u
CN480
4P :SE500
5P :SE800/SX800
MA-373 BOARD (7/9)
CN501
(SEE PAGE 4-25)
FRONT VIDEO IN 1
AN GND 2
FRONT AU(L) IN 3
AU GND 4
FRONT AU(R) IN 5
JL490
JL491
JL492
JL493
JL494
J481
2P :SE500
3P :SE800/SX800
SE800/
SX800
R
L
VIDEO
AUDIO
LINE-2
IN
C481
0.001u
D481
STZ6.8N-T146
D490
STZ6.8N-T146
D491
STZ6.8N-T146
SE800/SX800
D480
PDZ6.8B-115
R480
75
05
SIGNAL PATH
VIDEO SIGNAL
Y/CHROMA
AUDIO
SIGNAL
REC

**–SLV-SE800/SX800 –**

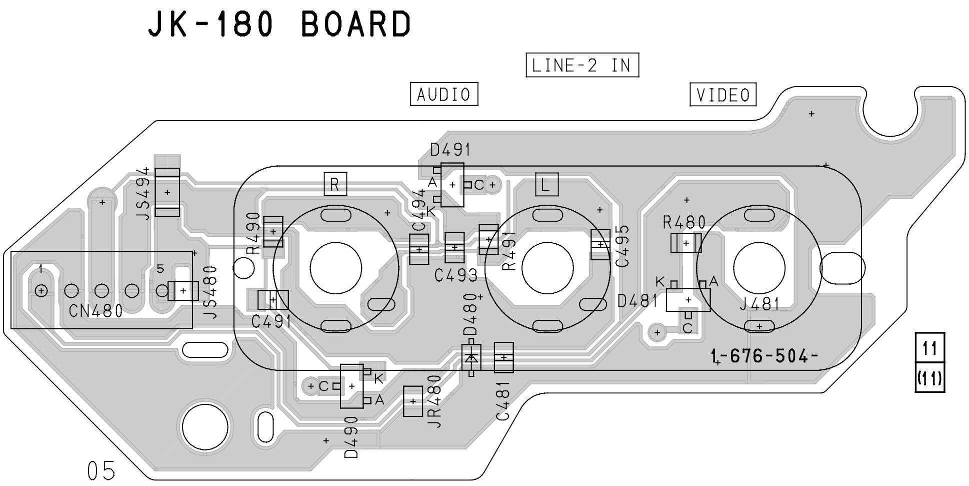

1
2
3
4
5
A
B
C
KK-23 BOARD
CN402 4P
DS-91 BOARD
CN452
(SEE PAGE 4-36)
D GND 4
KKP- 3
KKP+ 2
KKP SW 1
JL413
JL414
JL415
JL416
1 B
3 A
4 E
5 D
6
7
S1
2
S410
DIAL TIMER
PUSH/TURN
05

## JK-180 (FRONT IN), KK-23 (DIAL TIMER) PRINTED WIRING BOARDS

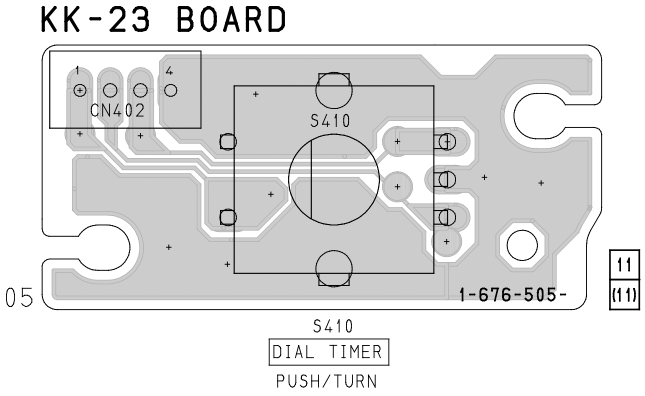
– Ref. No.: JK-180 board, KK-23 board; 1,000 series –

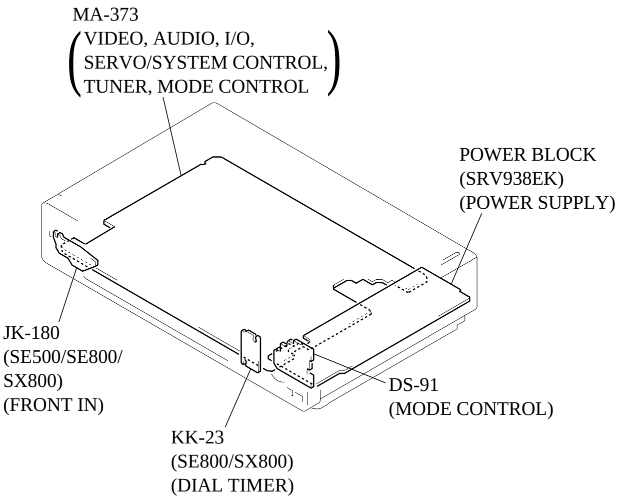
There are few cases that the part isn't mounted in this model is printed on this diagram.

**–SLV-SE500/SE800/SX800 –**


JK-180 BOARD
LINE-2 IN
AUDIO
VIDEO
D491
R
L
JS494
R490
C494
C493
R491
C495
R480
CN480
1
5
JS480
C491
D480
D481
J481
K
A
C
1-676-504-
11
(11)
D490
JR480
C481
05

**–SLV-SE800/SX800 –**

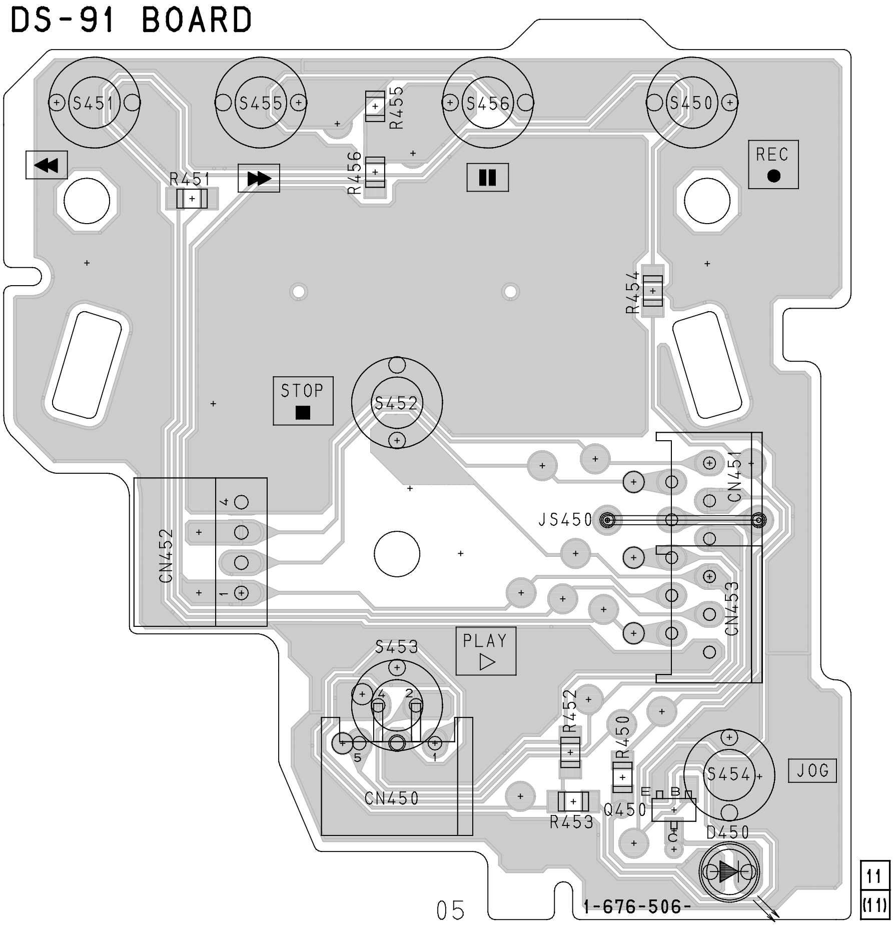

KK-23 BOARD
CN402
1
4
S410
1-676-505-
11
(11)
05
S410
DIAL TIMER
PUSH/TURN

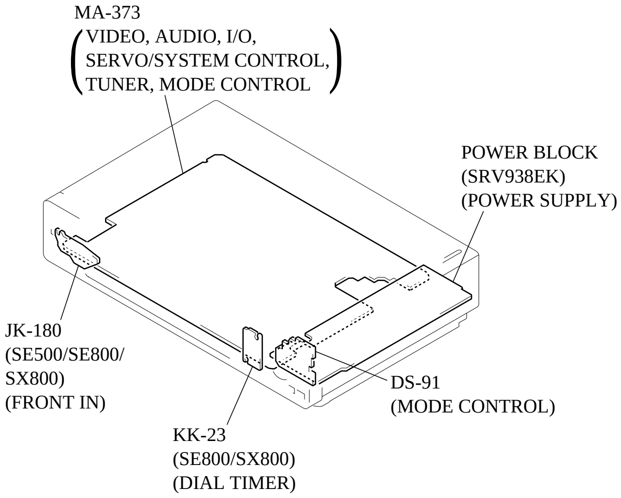

MA-373
(VIDEO, AUDIO, I/O,
SERVO/SYSTEM CONTROL,
TUNER, MODE CONTROL)
POWER BLOCK
(SRV938EK)
(POWER SUPPLY)
JK-180
(SE500/SE800/
SX800)
(FRONT IN)
DS-91
(MODE CONTROL)
KK-23
(SE800/SX800)
(DIAL TIMER)

## DS-91 (MODE CONTROL) PRINTED WIRING BOARD

– Ref. No.: DS-91 board; 1,000 series –

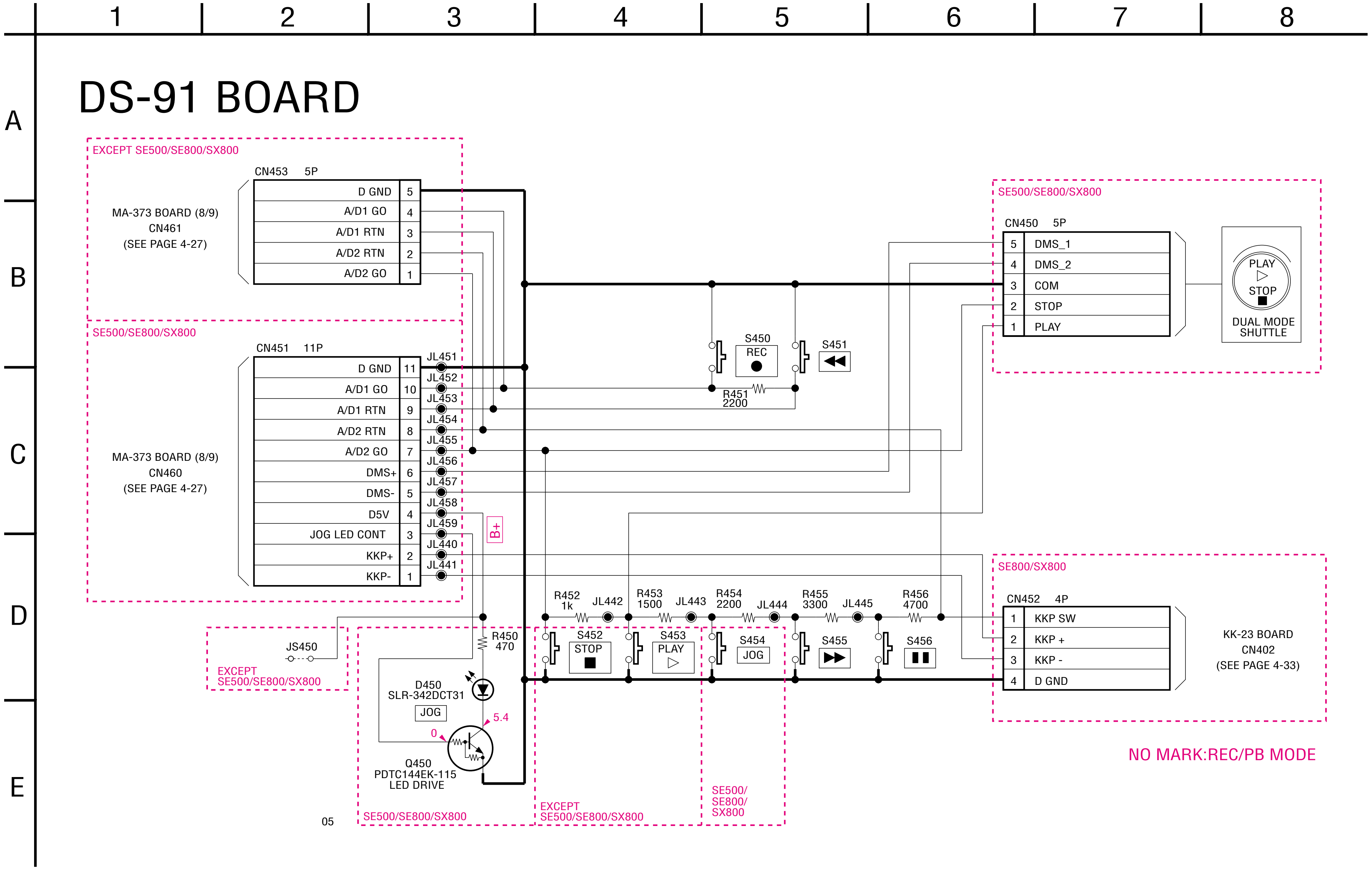
There are few cases that the part isn't mounted in this model is printed on this diagram.


DS-91 BOARD
S451
S455
R455
S456
S450
REC
R451
R456
R454
STOP
S452
CN451
JS450
CN452
4
1
CN453
S453
PLAY
4
2
5
1
R452
R450
S454
JOG
CN450
R453
Q450
E
B
C
D450
05
1-676-506-
11
(11)


MA-373
(VIDEO, AUDIO, I/O, SERVO/SYSTEM CONTROL, TUNER, MODE CONTROL)
POWER BLOCK
(SRV938EK)
(POWER SUPPLY)
JK-180
(SE500/SE800/
SX800)
(FRONT IN)
DS-91
(MODE CONTROL)
KK-23
(SE800/SX800)
(DIAL TIMER)

## DS-91 (MODE CONTROL) SCHEMATIC DIAGRAM

– Ref. No.: DS-91 board; 1,000 series –


1
2
3
4
5
6
7
8
A
B
C
D
E
DS-91 BOARD
EXCEPT SE500/SE800/SX800
CN453 5P
MA-373 BOARD (8/9)
CN461
(SEE PAGE 4-27)
D GND 5
A/D1 GO 4
A/D1 RTN 3
A/D2 RTN 2
A/D2 GO 1
SE500/SE800/SX800
CN451 11P
MA-373 BOARD (8/9)
CN460
(SEE PAGE 4-27)
D GND 11
A/D1 GO 10
A/D1 RTN 9
A/D2 RTN 8
A/D2 GO 7
DMS+ 6
DMS- 5
D5V 4
JOG LED CONT 3
KKP+ 2
KKP- 1
JL451
JL452
JL453
JL454
JL455
JL456
JL457
JL458
JL459
JL440
JL441
B+
S450
REC
S451
R451
2200
SE500/SE800/SX800
CN450 5P
5 DMS_1
4 DMS_2
3 COM
2 STOP
1 PLAY
PLAY
STOP
DUAL MODE
SHUTTLE
R452
1k
JL442
R453
1500
JL443
R454
2200
JL444
R455
3300
JL445
R456
4700
S452
STOP
S453
PLAY
S454
JOG
S455
S456
SE800/SX800
CN452 4P
1 KKP SW
2 KKP +
3 KKP -
4 D GND
KK-23 BOARD
CN402
(SEE PAGE 4-33)
JS450
EXCEPT
SE500/SE800/SX800
R450
470
D450
SLR-342DCT31
JOG
5.4
0
Q450
PDTC144EK-115
LED DRIVE
05
SE500/SE800/SX800
EXCEPT
SE500/SE800/SX800
SE500/
SE800/
SX800
NO MARK:REC/PB MODE

## SRV938EK (POWER SUPPLY) PRINTED WIRING BOARD

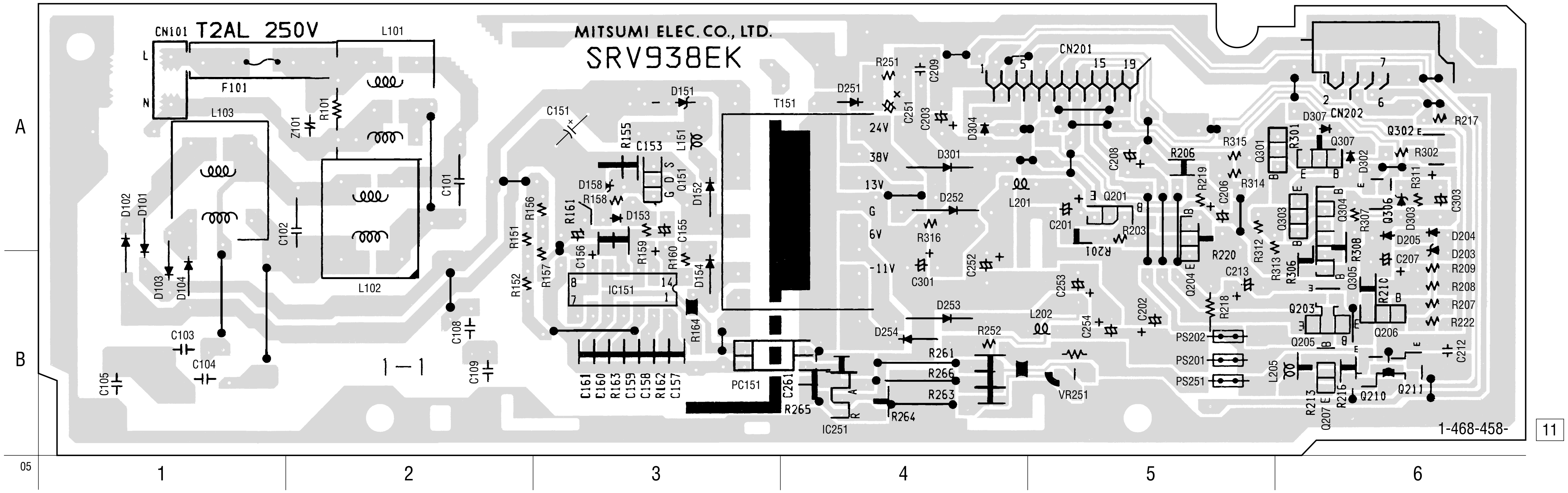
– Ref. No.: SRV938EK board; 2,000 series –

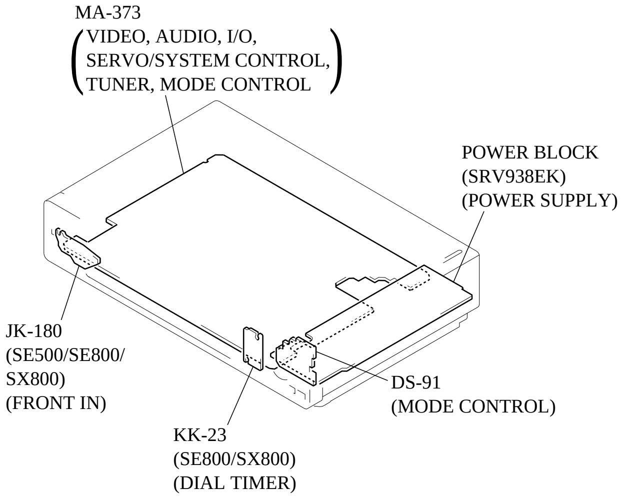
SRV938EK BOARD

| | |
|---|---|
| CN101 | A-1 |
| CN201 | A-5 |
| CN202 | A-6 |
| D101 | B-1 |
| D102 | B-1 |
| D103 | B-1 |
| D104 | B-1 |
| D151 | A-3 |
| D152 | A-3 |
| D153 | A-3 |
| D154 | B-3 |
| D158 | A-3 |
| D203 | B-6 |
| D204 | A-6 |
| D205 | A-6 |
| D251 | A-4 |
| D252 | A-4 |
| D253 | B-4 |
| D254 | B-4 |
| D301 | A-4 |
| D302 | A-6 |
| D303 | A-6 |
| D304 | A-4 |
| D307 | A-6 |
| IC151 | B-3 |
| IC251 | B-4 |
| Q151 | A-3 |
| Q201 | A-5 |
| Q203 | B-6 |
| Q204 | B-5 |
| Q205 | B-6 |
| Q206 | B-6 |
| Q207 | B-6 |
| Q210 | B-6 |
| Q211 | B-6 |
| Q301 | A-5 |
| Q302 | A-6 |
| Q303 | A-6 |
| Q304 | A-6 |
| Q305 | B-6 |
| Q306 | A-6 |
| Q307 | A-6 |

There are few cases that the part isn't mounted in this model is printed on this diagram.

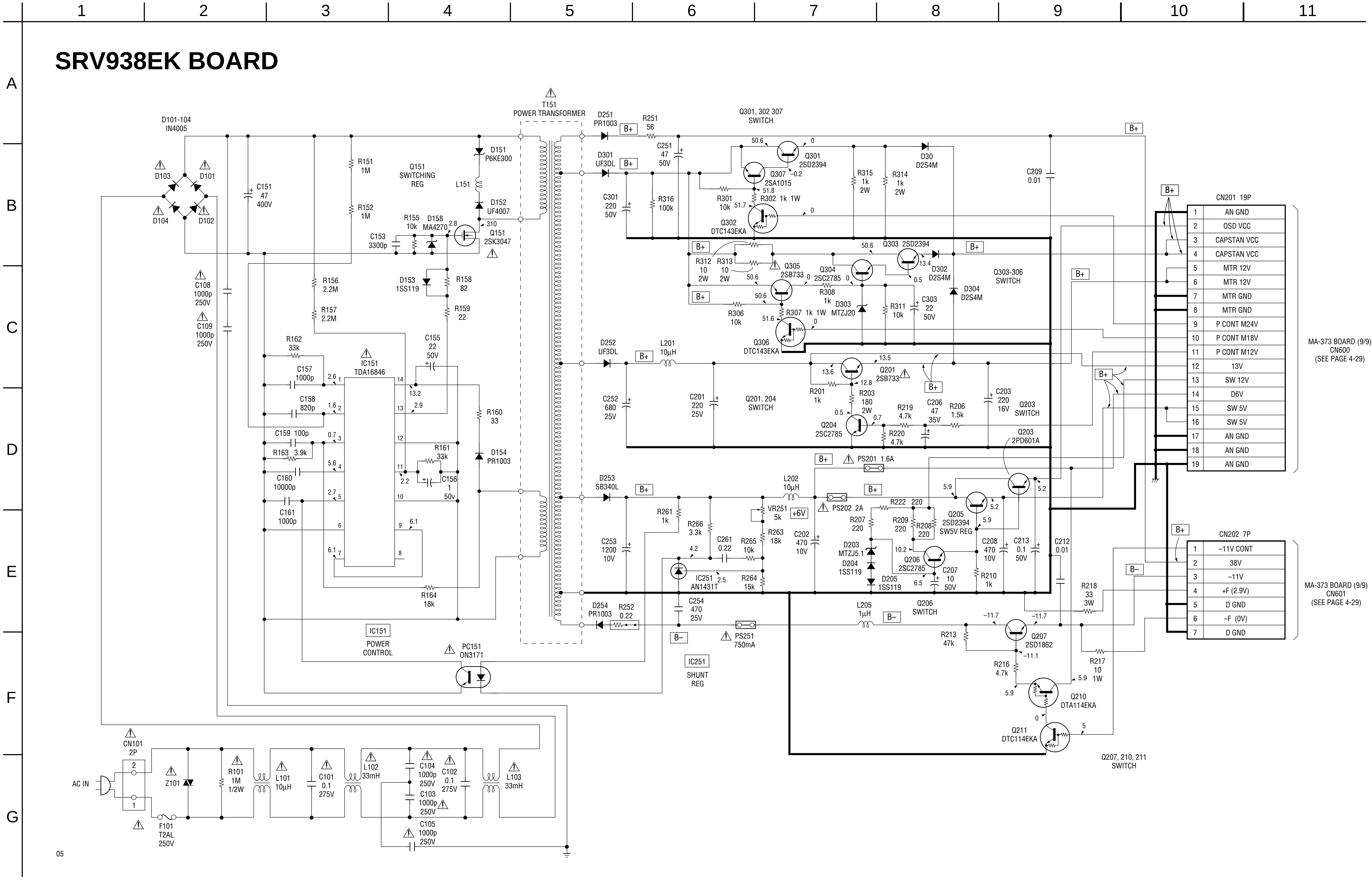
**SRV938EK BOARD**


CN101
T2AL 250V
L101
MITSUMI ELEC.CO., LTD.
SRV938EK
L
N
F101
L103
Z101
R101
C151
D151
R155
C153
L151
T151
D251
R251
C209
CN201
1
5
15
19
24V
38V
13V
G
6V
-11V
C251
C203
D304
D301
D252
R316
C301
C252
D253
D254
R252
L202
C253
C254
C202
L201
C201
Q201
R203
R201
C208
R206
R219
C206
R315
R314
Q301
R301
D307
CN202
2
6
7
Q307
D302
Q302
R217
R302
R311
C303
D303
Q306
D205
D204
D203
R209
R208
R207
R222
C212
C207
Q303
Q304
R307
R308
R313
R306
Q305
R312
C213
R220
Q204
R218
R210
Q203
Q206
Q205
L205
R213
Q207
R215
Q210
Q211
PS202
PS201
PS251
VR251
R261
R266
R263
R264
R265
C261
PC151
IC251
D158
R158
D153
R161
C156
R159
R160
C155
Q151
D152
D154
IC151
8
14
7
1
R164
C161
C160
R163
C159
C158
R162
C157
R151
R156
R152
R157
C101
C102
C108
C109
L102
D102
D101
D103
D104
C103
C104
C105
1-1
1-468-458-
11
A
B
05
1
2
3
4
5
6


MA-373
VIDEO, AUDIO, I/O, SERVO/SYSTEM CONTROL, TUNER, MODE CONTROL
POWER BLOCK (SRV938EK) (POWER SUPPLY)
JK-180 (SE500/SE800/SX800) (FRONT IN)
KK-23 (SE800/SX800) (DIAL TIMER)
DS-91 (MODE CONTROL)

## SRV938EK (POWER SUPPLY) SCHEMATIC DIAGRAM

– Ref. No.: SRV938EK board; 2,000 series –


1
2
3
4
5
6
7
8
9
10
11
A
B
C
D
E
F
G
SRV938EK BOARD
D101-104
IN4005
D103
D101
D104
D102
C151
47
400V
C108
1000p
250V
C109
1000p
250V
R151
1M
R152
1M
Q151
SWITCHING
REG
R155
10k
D158
MA4270
2.8
C153
3300p
Q151
2SK3047
310
D151
P6KE300
L151
D152
UF4007
T151
POWER TRANSFORMER
R156
2.2M
R157
2.2M
D153
1SS119
R158
82
R159
22
R162
33k
C157
1000p
C158
820p
C159 100p
R163 3.9k
C160
10000p
C161
1000p
IC151
TDA16846
C155
22
50V
13.2
2.9
R160
33
R161
33k
C156
1
50v
2.2
6.1
D154
PR1003
R164
18k
IC151
POWER
CONTROL
PC151
ON3171
D251
PR1003
B+
R251
56
D301
UF3DL
C251
47
50V
C301
220
50V
R316
100k
Q301, 302 307
SWITCH
50.6
0
Q301
2SD2394
Q307
2SA1015
-0.2
51.8
R301
10k
51.7
R302 1k 1W
Q302
DTC143EKA
R315
1k
2W
R314
1k
2W
D30
D2S4M
C209
0.01
R312
10
2W
R313
10
2W
Q305
2SB733
Q304
2SC2785
Q303 2SD2394
13.4
D302
D2S4M
D304
D2S4M
Q303-306
SWITCH
R308
1k
D303
MTZJ20
R306
10k
R307 1k 1W
R311
10k
C303
22
50V
Q306
DTC143EKA
D252
UF3DL
L201
10µH
C252
680
25V
C201
220
25V
Q201, 204
SWITCH
13.5
13.6
Q201
2SB733
12.8
R201
1k
R203
180
2W
R219
4.7k
C206
47
35V
R206
1.5k
C203
220
16V
Q203
SWITCH
Q204
2SC2785
R220
4.7k
Q203
2PD601A
PS201 1.6A
D253
SB340L
L202
10µH
PS202 2A
R261
1k
R266
3.3k
VR251
5k
+6V
R263
18k
R222 220
Q205
2SD2394
SW5V REG
R207
220
R209
220
R208
220
C253
1200
10V
C261
0.22
R265
10k
C202
470
10V
D203
MTZJ5.1
D204
1SS119
Q206
2SC2785
C208
470
10V
C213
0.1
50V
C212
0.01
IC251
AN1431T
R264
15k
D205
1SS119
C207
10
50V
R210
1k
C254
470
25V
D254
PR1003
R252
0.22
B–
PS251
750mA
IC251
SHUNT
REG
L205
1µH
Q206
SWITCH
R213
47k
-11.7
Q207
2SD1862
-11.1
R218
33
3W
R216
4.7k
Q210
DTA114EKA
R217
10
1W
Q211
DTC114EKA
Q207, 210, 211
SWITCH
CN201 19P
1 AN GND
2 OSD VCC
3 CAPSTAN VCC
4 CAPSTAN VCC
5 MTR 12V
6 MTR 12V
7 MTR GND
8 MTR GND
9 P CONT M24V
10 P CONT M18V
11 P CONT M12V
12 13V
13 SW 12V
14 D6V
15 SW 5V
16 SW 5V
17 AN GND
18 AN GND
19 AN GND
MA-373 BOARD (9/9)
CN600
(SEE PAGE 4-29)
CN202 7P
1 –11V CONT
2 38V
3 –11V
4 +F (2.9V)
5 D GND
6 –F (0V)
7 D GND
MA-373 BOARD (9/9)
CN601
(SEE PAGE 4-29)
CN101
2P
AC IN
Z101
F101
T2AL
250V
R101
1M
1/2W
L101
10µH
C101
0.1
275V
L102
33mH
C104
1000p
250V
C103
1000p
250V
C105
1000p
250V
C102
0.1
275V
L103
33mH
05

**Note:** The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

# SECTION 5
# INTERFACE, IC PIN FUNCTION DESCRIPTION

## 5-1. SYSTEM CONTROL – VIDEO BLOCK INTERFACE (MA-373 BOARD IC162)

| Signal | Pin No. | I/O | STOP/ FF/ REW | TAPE LOADING | TAPE UNLOADING | PB | REC | REC • PAUSE |
|---|---|---|---|---|---|---|---|---|
| RF SWP | MA-373 IC162⑱ | O | *1 | *1 | *1 | *1 | *1 | *1 |
| QVD | MA-373 IC162⑬ | O | L | L | L | *2 | L | L |
| C V IN | MA-373 IC162(56) | I | *3 | *3 | *3 | *3 | *3 | *3 |

*1. 25 Hz pulse with 50% duty cycle. Synchronized with rotation of drum.
*2. Normally “L”. “H” when video signal is not generated.
*3. Composite sync signal (positive polarity).

## 5-2. SYSTEM CONTROL – SERVO PERIPHERAL CIRCUIT INTERFACE (MA-373 BOARD IC162)

| Signal | Pin No. | I/O | STOP | FF | REW | TAPE LOADING | TAPE UNLOADING | PB | REC |
|---|---|---|---|---|---|---|---|---|---|
| CTL IN+ | MA-373 IC162(95) | I/O | *7 | *7 | *7 | *7 | *7 | *7 | *1 |
| DRUM PG | MA-373 IC162(90) | I | *3 | *3 | *3 | *3 | *3 | *3 | *3 |
| DRUM FG | MA-373 IC162(89) | I | *4 | *4 | *4 | *4 | *4 | *4 | *4 |
| CAP FG | MA-373 IC162(87) | I | H/L | *2 | *2 | *5 | *5 | *2 | *2 |
| CAP RVS | MA-373 IC162㉔ | O | H/L | L | H | L | H | L | L |
| CAP ERR | MA-373 IC162(76) | O | L | *6 | *6 | *6 | *6 | *6 | *6 |
| DRUM ERR | MA-373 IC162(77) | O | *6 | *6 | *6 | *6 | *6 | *6 | *6 |

*1. 25 Hz pulse.
*2. Pulse of period in proportion to tape speed.
*3. 25 Hz “H” pulse.
*4. 330 Hz pulse.

*5. Unstable period pulse.
*6. DC voltage 1 to 5V
*7. Hi-Z (2.5V)

## 5-3. SYSTEM CONTROL – MECHANISM BLOCK INTERFACE (MA-373 BOARD IC162)

| Signal | Pin No. | I/O | EJECTED | CASSETTE LOADING | CASSETTE UNLOADING | TAPE THREAD-ING | TAPE UNTHREAD-ING | STOP | FF | REW | PB | REC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CAM | MA-373<br>IC162㉝ | O | M | H/M | L/M | H/M | L/M | M | M | M | M | M |
| MODE 1 | MA-373<br>IC162㉙ | I | H | – | – | L | L | H | H | H | H | H |
| MODE 2 | MA-373<br>IC162㉘ | I | H | – | – | L | L | H | H | H | L | L |
| MODE 3 | MA-373<br>IC162㉗ | I | L | – | – | H | H | H | L | L | L | L |
| MODE 4 | MA-373<br>IC162㉖ | I | L | – | – | H | H | L | H | H | L | L |
| REC PRF | MA-373<br>IC162㉚ | I | L | *1 | *1 | *1 | *1 | *1 | *1 | *1 | *1 | *1 |
| T REEL | MA-373<br>IC162(80) | I | H/L | H/L | H/L | H/L | H/L | H/L | *2 | *2 | *2 | *2 |
| S REEL | MA-373<br>IC162(79) | I | H/L | H/L | H/L | *2 | *2 | H/L | *2 | *2 | *2 | *2 |
| END LED | MA-373<br>IC162⑳ | O | L | L | L | *3 | *3 | *3 | *3 | *3 | *3 | *3 |
| T SENS | MA-373<br>IC162⑦ | I | *3 | *3 | *3 | *4 | *4 | *4 | *4 | *4 | *4 | *4 |
| S SENS | MA-373<br>IC162⑥ | I | *3 | *3 | *3 | *4 | *4 | *4 | *4 | *4 | *4 | *4 |

*1. “L” when erasing protection tab is bent. “H” when not bent.
*2. Pulse of period in proportion to reel rotating speed.
*3. Approx. 2 msec period “H” pulse.
*4. Normally “L”. 2 msec period “H” pulse when tape top or tape end is detected.

## 5-4. SYSTEM CONTROL – SYSTEM CONTROL PERIPHERAL CIRCUIT INTERFACE (MA-373 BOARD IC162)

| Signal | Pin No. | I/O | I/O Level |
|---|---|---|---|
| RESET | MA-373<br>IC162㉞ | I | Normally “H”, “L” when service interruption is detected or restored. |
| NICAM DATA | MA-373<br>IC162㊷ | O | Serial communication data to Tuner. |
| NICAM CLK | MA-373<br>IC162㊶ | O | Serial communication clock to with Tuner. |

## 5-5. SYSTEM CONTROL – AUDIO BLOCK INTERFACE (MA-373 BOARD IC162)

| Signal | Pin No. | I/O | STOP/ FF/ REW | TAPE LOADING | TAPE UNLOADING | PB | REC | PB • PAUSE |
|---|---|---|---|---|---|---|---|---|
| A MUTE | MA-373<br>IC162(83) | O | L | L | L | L | L | H |

# 5-6. SERVO/SYSTEM CONTROL MICROPROCESSOR PIN FUNCTION (MA-373 BOARD IC162)

| Pin No. | Pin Name | I/O | Function |
|---|---|---|---|
| 1 | DEST1 | I | Destination identification input 1 |
| 2 | DEST2 | I | Destination identification input 2 |
| 3 | TU AFT | I | AFT input from TUNER for station selection |
| 4 | FU KEY2 | I | Function key input (9 keys) |
| 5 | FU KEY1 | I | Function key input (9 keys) |
| 6 | S SENS | I | Tape end sensor input |
| 7 | T SENS | I | Tape top sensor input |
| 8 | RF ENV | I | Video RF envelope input |
| 9 | AF ENV | I | HiFi envelope input |
| 10 | MOD CONT | O | RF modulator ON/OFF control |
| 11 | KKP + | I | KKP 2-phase pulse B input |
| 12 | KKP - | I | KKP 2-phase pulse A input |
| 13 | QVD | O | Pseudo VO output |
| 14 | REMOCON | I | Remote control SIRCS signal input |
| 15 | CROT | O | Head azimuth information |
| 16 | HA SW | O | SP/EP head switching signal |
| 17 | ENV S | I | Identification signal of SP/EP head output comparison & detection |
| 18 | RF SWP | O | Video RF switching pulse output |
| 19 | AF SWP | O | HiFi switching pulse output |
| 20 | END LED | O | End sensor LED output |
| 21 | AV CONT | O | EURO 21 pin AV CONT signal output |
| 22 | AF REC P | O | HiFi record control signal |
| 23 | FULL ERS | O | Full erase control signal for A DUB |
| 24 | CAP RVS | O | Inverted capstan signal |
| 25 | I CONT | O | EURO 21 pin-I CONT signal output |
| 26 | MODE 4 | I | Cam encode data 4 |
| 27 | MODE 3 | I | Cam encode data 3 |
| 28 | MODE 2 | I | Cam encode data 2 |
| 29 | MODE 1 | I | Cam encode data 1 |
| 30 | REC PRF | I | Safety tab detection input |
| 31 | IIC CLK1 (EEP) | O | IIC clock (EEPROM control) |
| 32 | IIC DATA1 (EEP) | I/O | IIC data (EEPROM control) |
| 33 | CAM | O | Cam motor control signal |
| 34 | RESET | I | Reset input |
| 35 | 32kHz (in) | I | Sub clock input |
| 36 | 32kHz (out) | O | Sub clock output |
| 37 | VCC | – | Power supply input terminal (high speed mode: 4.0 to 5.5V, low speed mode: 2.6 to 5.5V) |
| 38 | 17.734475MHz (in) | I | Main clock input |
| 39 | 17.734475MHz (out) | O | Main clock output |
| 40 | VSS | – | Ground terminal |
| 41 | NICAM CLK | O | Clock for NICAM-ZWEI control |
| 42 | NICAM DATA | O | Data for NICAM-ZWEI control |
| 43 | CLK SEL | I | Selection of oscillation clock when reset is canceled<br>“L”: sub clock, “H”: main & sub clocks |
| 44 | OSC CHARA (IN) | I/O | Clock input for OSD character size |
| 45 | OSC CHARA (OUT) | I/O | Clock output for OSD character size |
| 46 | NUB | – | Connected to Ground |
| 47 | OSD LPF | I/O | External filter that doubles the FSC, is connected to this terminal |
| 48 | LP | O | “L” at SP, “H” at EP/LP |

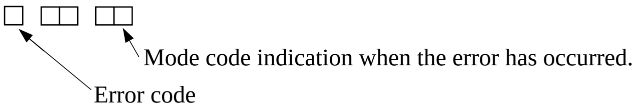
| Pin No. | Pin Name | I/O | Function |
|---|---|---|---|
| 49 | OSD GND | – | Ground terminal of OSD/slicer |
| 50 | OSD V IN | I | Video signal input for OSD overlay |
| 51 | OSD W LEVEL | I | OSD white level input |
| 52 | OSD V OUT | O | OSD video signal output |
| 53 | OSD VCC | – | Power supply input terminal for OSD/slicer (4.75 V to 5.25 V) |
| 54 | HLF (SLICER LPF) | I/O | LPF connection terminal for slicer/AFC (This terminal is used as the HLF terminal when C. Video is input to pin-56.) |
| 55 | OSD SECAM C IN | I | Color signal input for SECAM OSD |
| 56 | C V IN (C SYNC IN) | I | Video signal input for tuner's station selection, OSD and servo sync signal detection (after passing filter) |
| 57 | NUA | – | Connected to Ground |
| 58 | DEC/VTR | O | Decoder/VTR switching |
| 59 | PDC DAV | I | PDC/VPS signal reception identification input |
| 60 | AV CONT IN/C+DET | I | CANAL + connection identification input |
| 61 | DIV CLK OUT/JOGLED CONT | O | Terminal of using JOG LED output or adjustment made output of clock dividing frequency |
| 62 | TA MUTE | O | Tuner audio mute signal output |
| 63 | A MUTE | O | Audio mute signal output |
| 64 | MTR12V CONT | O | Motor 12 V power control signal |
| 65 | SW5V CONT | O | SW 5 V power control signal |
| 66 | FLD CS | O | Chip selection signal for display tube driver |
| 67 | SECAM ON | O | SECAM ON signal/surround audio control (switched by destination) |
| 68 | TO FLD DATA | O | Serial data out CH0 (FLD) |
| 69 | 18V CONT | O | 18 V power control signal |
| 70 | FLD CLOCK | O | Serial clock CH0 (FLD) |
| 71 | SCL (VI/HF/TU/NICAM. ZWEI/MOD/VPS/DNR) | I/O | IIC clock (video/HiFi/tuner/ARC/modulator/VPS control) |
| 72 | SDA (VI/HF/TU/NICAM. ZWEI/MOD/VPS/DNR) | I/O | IIC data (video/HiFi/tuner/ARC/modulator/VPS control) |
| 73 | TO AV LINK | O | AV-LINK data output for communication |
| 74 | -14V CONT | O | Power save control |
| 75 | C+5V CONT | O | Power save control |
| 76 | CAP ERR | O | Capstan error output |
| 77 | DRUM ERR | O | Drum error output |
| 78 | P FAIL | I | Power failure detection input |
| 79 | S REEL | I | Supply reel sensor input |
| 80 | T REEL | I | Take up reel sensor input |
| 81 | DMS + | I | DMS 2-phase pulse 1 input |
| 82 | DMS - | I | DMS 2-phase pulse 2 input |
| 83 | TU SW1 | O | Tuner system BG/L selection signal |
| 84 | TU SW2 | O | Tuner system BGL/L selection signal |
| 85 | FROM AV LINK | I | AV-LINK data input for communication |
| 86 | SECAM DET | I | SECAM identification input |
| 87 | CAP FG | I | Capstan FG input |
| 88 | AMP VSS | – | Ground terminal for analog amplifier (connected to Vss) |
| 89 | DRUM FG | I | Drum FG input |
| 90 | DRUM PG | I | Drum PG input |
| 91 | AMP VREF OUT | – | Analog amplifier reference power supply output terminal |
| 92 | AMP VREF IN | – | Analog amplifier reference power supply output terminal |
| 93 | RC CHECK | I | “No use (Fix to “”L”” on the outside for the terminal only for the input)” |

| Pin No. | Pin Name | I/O | Function |
|---|---|---|---|
| 94 | CTL IN- | I/O | CTL signal input/output terminal |
| 95 | CTL IN+ | I/O | CTL signal input/output terminal |
| 96 | AMPC | – | CTL amplifier AC Ground terminal |
| 97 | CTL AMP OUT | O | CTL amplifier output |
| 98 | AMP VCC | – | Power supply input terminal for analog amplifier (connected to Vcc) |
| 99 | AVCC | – | Power supply input and reference voltage input to A-D converter |
| 100 | 24V CONT | O | 24 V power control signal |

# SECTION 6
# ERROR CODES

## 6-1. ERROR CODE INDICATION

- Error codes are indicated using the lower 5 digits in the fluorescent display tube.
  “At this time, Colon “:”between character is not indicated.”



ERROR CODE

| | |
|---|---|
| 0 | No error |
| 1 | Cam encoder error Loading direction |
| 2 | Cam encoder error Unloading direction |
| 3 | T reel error |
| 4 | S reel error |
| 5 | Capstan error |
| 6 | Drum error |
| 7 | Error on initializing |
| 8 | Cassette loading error |
| 9 | Reserve |

MODE CODE

| | | | | | |
|---|---|---|---|---|---|
| 0 | Power-on eject | 10 | FWD x1 | 20 | REW play |
| 1 | Power-on initial | 11 | FWD x2 | 21 | Cas. loading |
| 2 | Power-off elect | 12 | CUE | 22 | Tape loading |
| 3 | Power-off stop | 13 | PB-pause | 23 | Power-off loading |
| 4 | FF | 14 | RVS-pause | 24 | Mecha. error (Power on) |
| 5 | REW | 15 | RVS x1 | 25 | Power-on eject initial |
| 6 | REC | 16 | RVS x2 | 26 | Power-off eject initial |
| 7 | REC-pause | 17 | REV | 27 | APC REC |
| 8 | Power-on stop | 18 | Power-off initial | 28 | Cas. loading |
| 9 | PB | 19 | Mecha. error (Power off) | | (No auto PB check) |

# SECTION 7
# ADJUSTMENTS

**During the adjustment, see the Parts Arrangement Diagram for Adjustments on Page 7-6.**

## 7-1. MECHANICAL ADJUSTMENTS

Refer to the SERVICE MANUAL of VHS MECHANICAL ADJUSTMENT VI.

## 7-2. ELECTRICAL ADJUSTMENTS

### 2-1. PRE-ADJUSTMENT PREPARATIONS

Necessary items and indications for total adjustment of electric circuit of this machine will be described in this chapter.

### 2-1-1. Instruments to be Used

1) Color TV
2) Oscilloscope 1 or 2 phenomena, band more than 30 MHz, delay mode, as provided.
3) NTSC pattern generator
4) PAL pattern generator
5) Digital voltmeter
6) Audio level meter
7) Audio noise meter
8) Audio generator
9) Attenuator
10) Alignment tape
    Part Code: 8-192-605-36 KRV-51P (PAL)
    Part Code: 8-192-605-32 KRV-51N2 (NTSC)

### 2-1-2. Connection

Unless otherwise specified, connect and adjust the measuring instruments as shown in the following diagram.

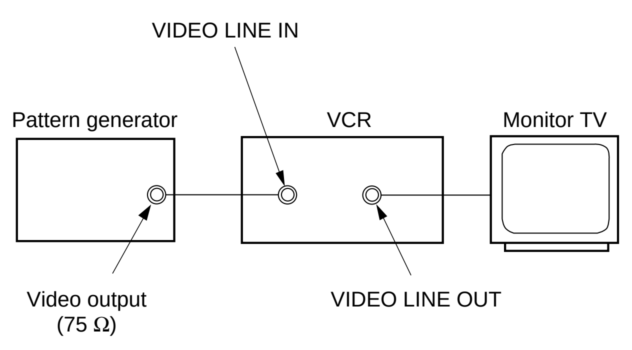

VIDEO LINE IN
Pattern generator
VCR
Monitor TV
Video output
(75 Ω)
VIDEO LINE OUT

*Fig. 7-2-1*

### 2-1-3. Set-up of Adjustment

In this adjustment, PAL or NTSC pattern generator is connected with LINE input signal terminal. When checking with tuner, connected AERIAL terminal. Check that the amplitudes of video signal SYNC signal, of picture portions, and of burst signals are flat at approximately 0.3, 0.7 and 0.3 V, respectively, and that the level ratio of the burst signal and “red” signal are 0.30: 0.66. Fig. 7-2-2. shows video signals (color bars) used in adjusting the video section.

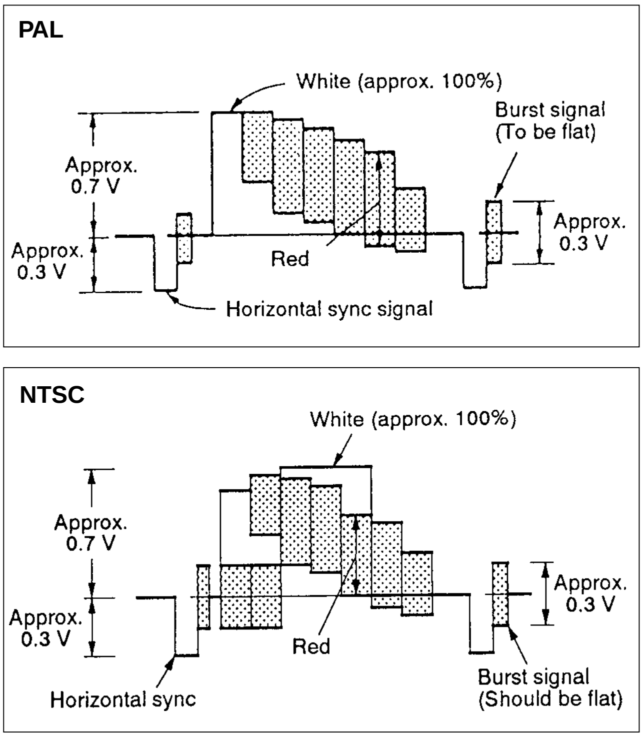

PAL
White (approx. 100%)
Burst signal
(To be flat)
Approx.
0.7 V
Approx.
0.3 V
Approx.
0.3 V
Red
Horizontal sync signal
NTSC
White (approx. 100%)
Approx.
0.7 V
Approx.
0.3 V
Approx.
0.3 V
Red
Horizontal sync
Burst signal
(Should be flat)

*Fig. 7-2-2*

### 2-1-4. Alignment Tapes
### [Alignment Tape (KRV-51N2/KRV-51P)]

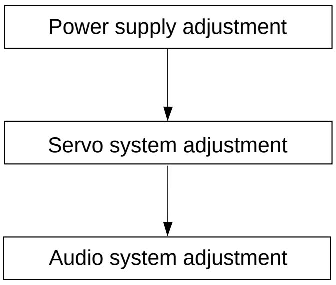
| | Mode | Time | Video signal | Audio signal (HiFi/Normal) |
|---|---|---|---|---|
| 1 | SP | Seven minutes | Color bar | 400 Hz |
| 2 | SP | Three minutes | Monoscope | |
| 3 | EP | Seven minutes | Color bar | |
| 4 | EP | Three minutes | Monoscope | |

### 2-1-5. Specified I/O Level and Impedance
**Input/output terminal**

| | |
|---|---|
| Video inputs | LINE IN : phono jack<br>1 Vp-p, 75 Ω, unbalanced, sync negative |
| Audio inputs | LINE IN : phono jacks<br>47 kW, –7.5 dBs (0 dBs = 0.775 Vrms)<br>More than 10 kW, –4 dBs |
| Video outputs | LINE OUT: phono jack<br>1 Vp-p, 75 Ω, unbalanced, sync negative |
| Audio outputs | LINE OUT: phono jacks<br>–7.5 dBs at load impedance 47 kΩ<br>Output impedance : less than 10 Ω |

### 2-1-6. Adjusting Sequence

Make the electrical adjustment in the following sequence.


Power supply adjustment
Servo system adjustment
Audio system adjustment

## 2-2. POWER SUPPLY ADJUSTMENTS

### 2-2-1. Power Supply Check (SRV938EK BOARD)

| | |
|---|---|
| Mode | E-E |
| Measuring Instrument | Digital voltmeter |
| MTR12 V check | |
| Measurement Point | Pin ⑤, ⑥ of CN201 |
| Specified Value | 13.5 ±0.4 V |
| D6 V check | |
| Measurement Point | Pin ⑭ of CN201 |
| Specified Value | 5.9 ± 0.2 V |
| +13 V check | |
| Measurement Point | Pin ⑫ of CN201 |
| Specified Value | 13.6 ± 0.5 V |
| +38 V check | |
| Measurement Point | Pin ② of CN202 |
| Specified Value | 35.0 ± 3.5 V |
| SW 5 Vcheck | |
| Measurement Point | Pin ⑮, ⑯ of CN201 |
| Specified Value | 5.2 ± 0.2 V |
| +F, –F check | |
| Measurement Point | Pin ④, ⑥ of CN202 |
| Specified Value | $2.9^{+0.6}_{-0.3}$ V |
| –11 V check | |
| Measurement Point | Pin ③ of CN202 |
| Specified Value | –11.5 ± 1.0 V |

**Checking Method:**

1) Confirm that each voltage meets its specified value.

### 2-2-2. +6 V Adjustment (SRV938EK BOARD)

| | |
|---|---|
| Mode | REC or PB |
| Measuring Instrument | Digital voltmeter |
| Measurement Point | Pin ⑭ of CN201 |
| Adjusting Element | VR251 |
| Specified Value | 5.9 ± 0.2 V |

## 2-3. SERVO SYSTEM ADJUSTMENT

### 2-3-1. RF Switching Position Adjustment (MA-373 BOARD)

**Purpose:**

Adjust the interval between A ch and B ch of tape playback output.

Improve the interchangeability with other tapes and sets.

When it is out of order, the interval appears on the screen, the screen is disturbed.

| | |
|---|---|
| Mode | PB |
| Signal | Alignment tape SP mode color bar |
| Measurement Point | CH1: Pin ① of CN262<br>CH2: Pin ② of CN262<br>(RF SWP) |
| Measuring Instrument | Oscilloscope |
| Specified Value | 6.5 ± 0.5 H (416 ± 32 µsec) PAL<br>6.5 ± 0.5 H (410 ± 32 µsec) NTSC |

**Adjusting Method:**

1) During playback, connect MA-373 board CN262 pin ③ and the pin ⑤ for about 1 second to activate the RF switching position adjustment mode.
2) Check appear "A P" on FL display.
3) Using the channel + and – buttons, adjust to 6.5 ± 0.5 H.
4) Press the pause button.

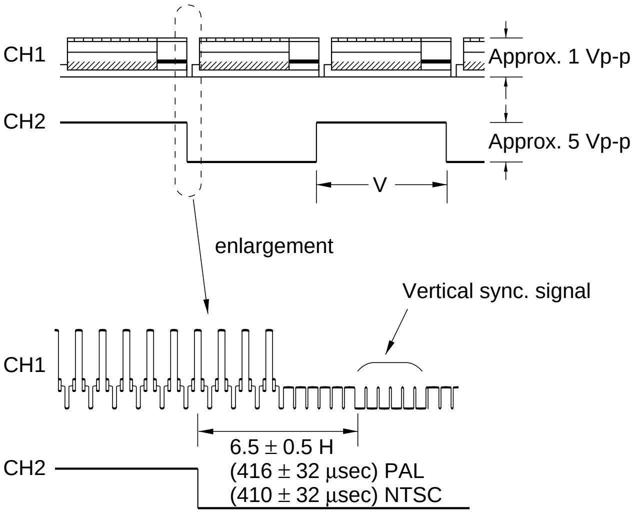

CH1
CH2
Approx. 1 Vp-p
Approx. 5 Vp-p
V
enlargement
Vertical sync. signal
CH1
CH2
6.5 ± 0.5 H
(416 ± 32 µsec) PAL
(410 ± 32 µsec) NTSC

*Fig. 7-2-3.*

## 2-4. AUDIO SYSTEM ADJUSTMENTS

- Adjust both Lch and Rch.

**[Connection]**

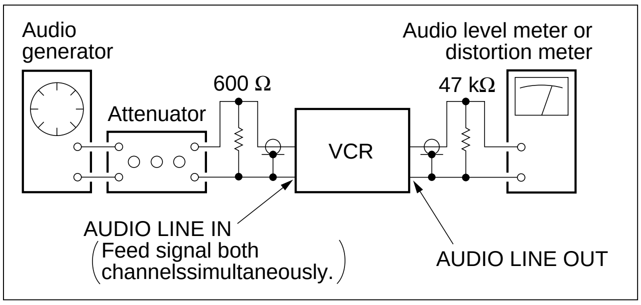

Audio generator
Audio level meter or distortion meter
600 Ω
47 kΩ
Attenuator
VCR
AUDIO LINE IN
(Feed signal both channelssimultaneously.)
AUDIO LINE OUT

*Fig. 7-2-4.*

### 2-4-1. Hi-Fi Audio System Adjustment (EXCEPT SLV-SE350/SE500)

- Set switches and knobs to the following positions to make adjustment unless otherwise specified.
  INPUT SELECT switch ................... LINE
  AUDIO MONITOR .......................... STEREO

**[Adjustment Sequence]**

1. **AF Switching Position Adjustment**
2. **Frequency Response Check**
3. **Overall Level Characteristic and Distortion Factor Check**
4. **Overall S/N Check**

### 1. AF Switching Position Adjustment (MA-373 BOARD)

**Purpose:**
Adjust the interval between A CH and B CH of tape playback output. Improve the interchangeability with other tapes and sets. When it is out of order, noisy sound is increased and big noise is heard.

| Mode | PB |
|---|---|
| Signal | Alignment tape SP mode<br>color bar |
| Measurement point | CH1: Pin ② of CN262<br>CH2: Pin ① of CN263 |
| Measuring Instrument | Oscilloscope |
| Specified Value | Fig. 7-2-5 |

**Adjusting Method:**

1) During playback, connect MA-373 board CN262 pin ③ and the pin ⑤ for about 1 second to activate the RF switching position adjustment mode.
2) Press the record button to activate the AF switching position adjustment mode.
3) Check appear “A H” on FL display.
4) Using the channels + and – buttons, minimize a chipped portion. At this time, confirm that a noisy sound is not heard.
5) Press the pause button.

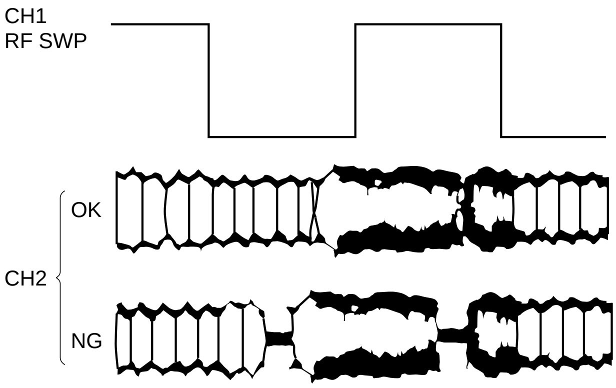


*Fig. 7-2-5.*

### 2. Frequency Response Check

**Purpose:**
Confirm that the frequency characteristic is within the specification.

| Mode | REC and PB (SP, LP mode) |
|---|---|
| Signal | 400 Hz, –26.3 dBs<br>30 Hz, –26.3 dBs<br>20 kHz, –26.3 dBs |
| Measurement point | Audio output terminal |
| Measurement equipment | Audio level meter |
| Specified value | 0 ± 3 dB |

**Note:** Tape path adjustment must have been completed.

**Confirmation Method:**

1) Supply a signal of 400 Hz, –26.3 dBs to both L and R channels of Audio Line Input.
2) Connect the audio level meter to the Audio Line Output.
3) Adjust the attenuator so that the audio level meter will indicate –26.3 dBs.
4) Make recording.
5) Set an audio line input signal to 30 Hz and make recording.
6) Set an audio line input signal to 20 kHz and make recording.
7) Playback a recorded portion, and measure output levels at 400 Hz and 30 Hz and 20 kHz.
8) Confirm that the 30 Hz and 20 kHz playback output level within a range of the 400 Hz playback output level 0 ± 3 dB.

### 3. Overall Level Characteristic and Distortion Factor Check

**Purpose:**
Check the record level, play level, and distortion factor against the reference input.

| | |
|---|---|
| Mode | REC and PB (SP mode) |
| Signal | 400 Hz, –6.3 dBs |
| Measurement point | Audio output terminal |
| Measurement equipment | Audio level meter and distortion factor meter |
| Specified value | Playback level: –6.3 ± 2.0 dBs<br>Distortion factor: 1% or less |

**Confirmation Method:**

1) Supply an audio signal of 400 Hz, –6.3 dBs simultaneously to both L and R channels of Audio Line Input.
2) Make recording
3) Play back a recorded portion.
4) Confirm that a playback level is –6.3 ± 2.0 dBs.
5) Confirm that a distortion factor is within 1%.

### 4. Overall S/N Check

**Purpose:**
Confirm that the S/N is within the specification.

| | |
|---|---|
| Mode | REC and PB (SP mode) |
| Signal | Short |
| Measurement point | Audio output terminal |
| Measurement equipment | Audio noise meter |
| Specified value | –67.5 dBs or less |

**Confirmation Method:**

1) Connect both L and R channels of audio line input to the GND.
2) Start recording.
3) Play the recorded part to confirm that the noise is below –67.5 dBs.

## 2-4-2. Normal Audio System Adjustment

- Make adjustment in the SP mode, unless otherwise specified. Use a normal VHS cassette for an adjustment tape.
- Set AUDIO MONITOR to normal.

**[Adjustment Sequence]**

1. **ACE Head Adjustment**
2. **E-E Output Level Check**
3. **Frequency Response Check**
4. **Overall Level Characteristic and Distortion Factor Check**
5. **Overall S/N Check**

### 1. ACE Head Adjustment

Refer to the SERVICE MANUAL of VHS MECHANICAL ADJUSTMENT VI.

### 2. E-E Output Level Check (SLV-SE350/SE500)

**Purpose:**
Confirm that the output level against the reference input is within the specification.

| | |
|---|---|
| Mode | E-E |
| Signal | L, R: 400 Hz, –6.3 dBs |
| Measurement point | Audio output terminal |
| Measurement equipment | Audio level meter |
| Specified value | –6.3 ± 2.0 dBs |

**Confirmation Method:**

1) Simultaneously input a signal of 400 Hz, –6.3 dBs to both L and R channels of Audio Line Input.
2) Confirm that the audio output level is –6.3 ± 2.0 dBs.
(This level only can appear with mono models)

### 3. Frequency Response Check

**Purpose:**
Confirm that the frequency characteristic is within the specification.

| | |
|---|---|
| Mode | REC and PB (SP mode) |
| Signal | 400 Hz, –26.3 dBs<br>7 kHz, –26.3 dBs |
| Measurement point | Audio output terminal |
| Measurement equipment | Audio level meter |
| Specified value | 0 ± 3 dB |

Tape path adjustment must have been completed.

**Confirmation Method:**

1) Supply a signal of 400 Hz, –26.3 dBs to both L and R channels of Audio Line Input.
2) Connect the audio level meter to the Audio Line Output.
3) Adjust the attenuator so that the audio level meter will indicate –26.3 dBs.
4) Make recording in the SP mode.
5) Set an audio line input signal to 7 kHz and make recording.
6) Playback a recorded portion, and measure output levels at 400 Hz and 7 kHz.
7) Confirm that the 7 kHz playback output level within a range of the 400 Hz playback output level 0 ± 3 dB.

### 4. Overall Level Characteristic and Distortion Factor Check

**Purpose:**

Check the record level, play level, and distortion factor against the reference input.

| Mode | REC and PB (SP mode) |
|---|---|
| Signal | 400 Hz, –6.3 dBs |
| Measurement point | Audio output terminal |
| Measurement equipment | Audio level meter and distortion factor meter |
| Specified value | Playback level: –6.3 ± 3.0 dBs<br>Distortion factor: 4% or less |

**Confirmation Method:**

1) Supply an audio signal of 400 Hz, –6.3 dBs simultaneously to both L and R channels of Audio Line Input.
2) Make recording
3) Play back a recorded portion.
4) Confirm that a playback level is –6.3 ± 3.0 dBs.
5) Confirm that a distortion factor is within 4%.

### 5. Overall S/N Check

**Purpose:**

Confirm that the S/N is within the specification.

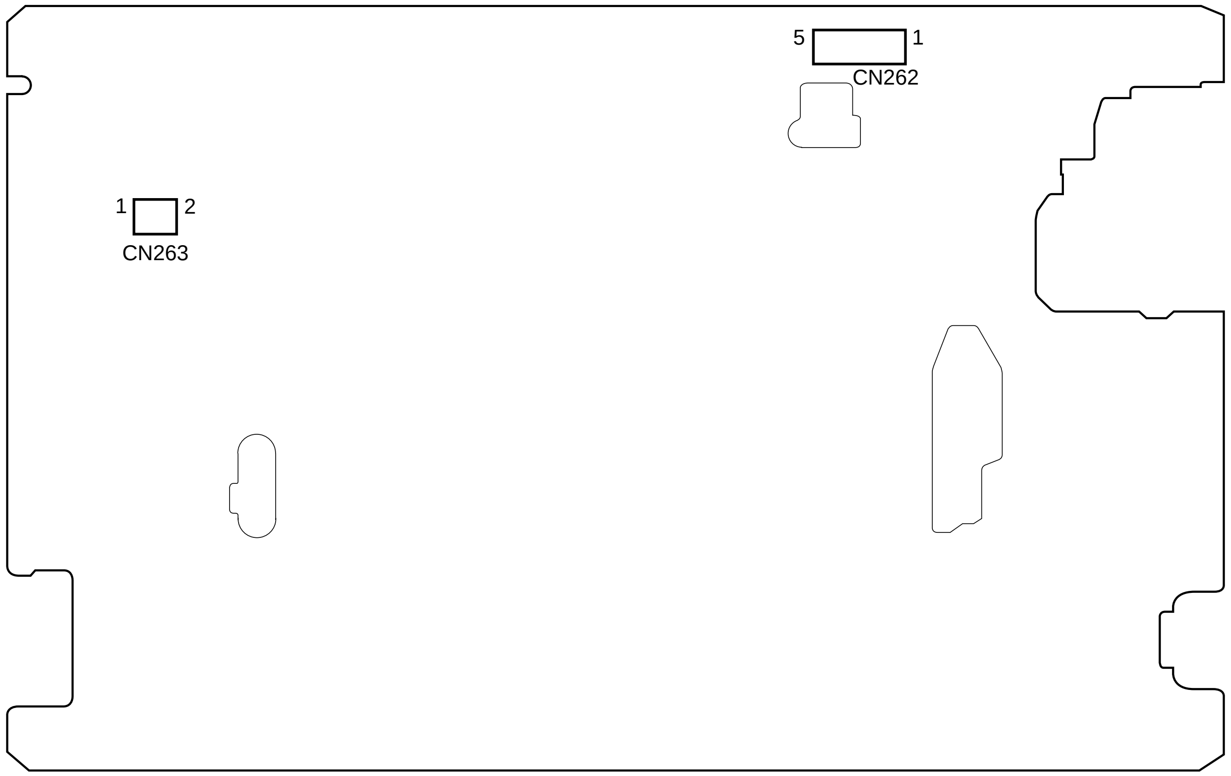
| Mode | REC and PB (SP mode) |
|---|---|
| Signal | Short |
| Measurement point | Audio output terminal |
| Measurement equipment | Audio noise meter |
| Specified value | –45.5 dBs or less |

**Confirmation Method:**

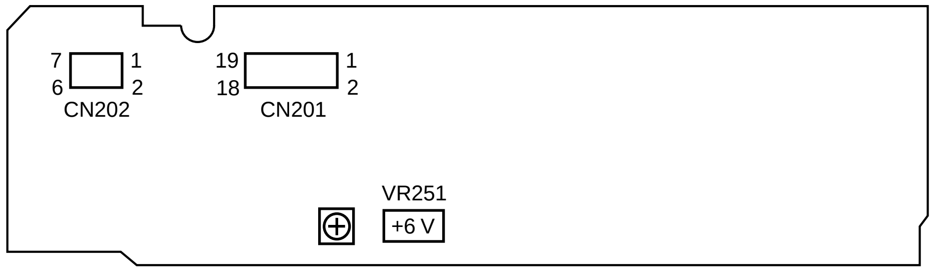
1) Connect both L and R channels of audio line input to the GND.
2) Start recording.
3) Play the recorded part to confirm that the noise is below –45.5 dBs.

## 2-5. PARTS ARRANGEMENT DIAGRAM FOR ADJUSTMENTS

### MA-373 BOARD (Side A)



### SRV938EK BOARD (Side A)



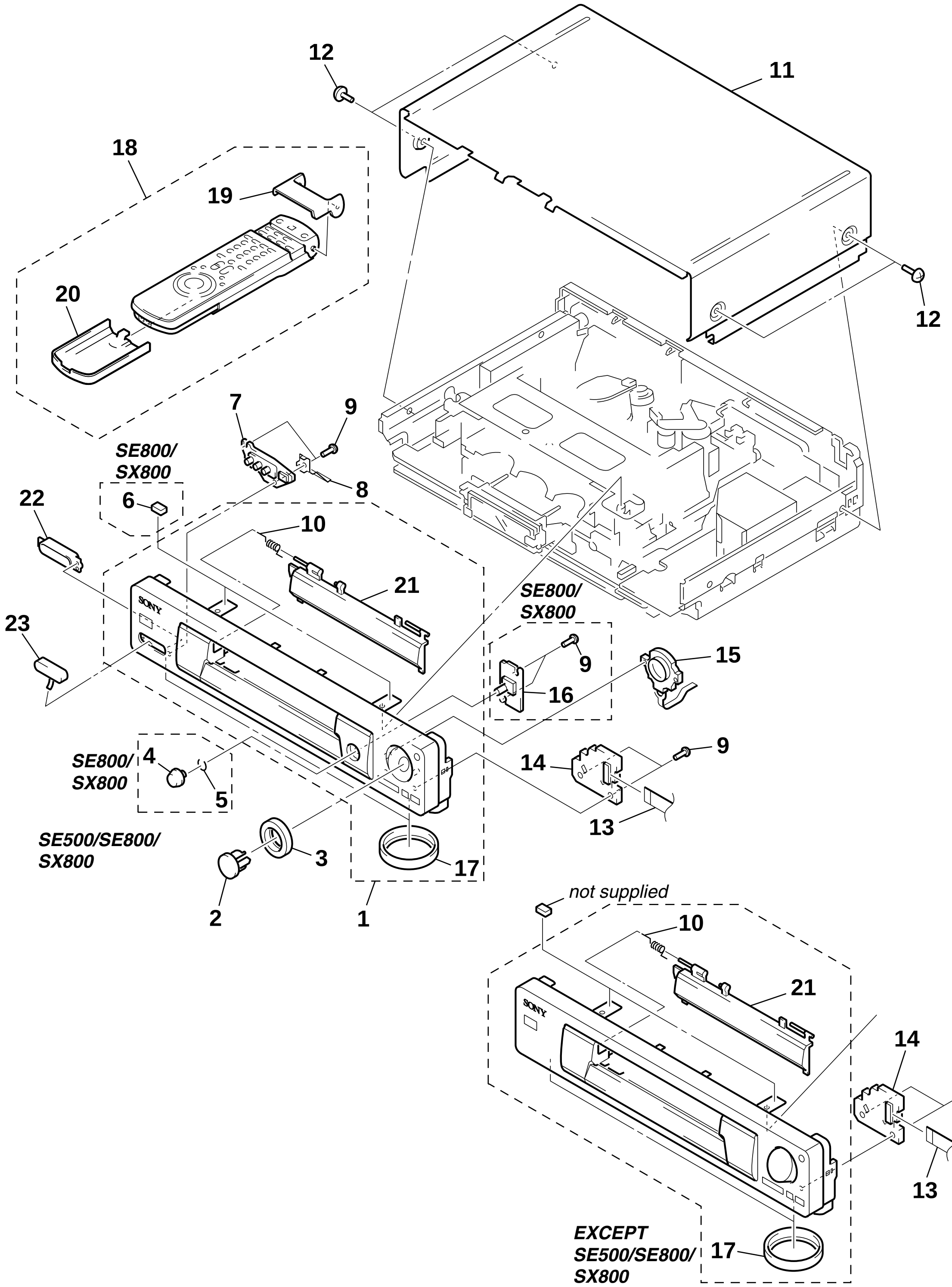
# SECTION 8
# REPAIR PARTS LIST

## 8-1. EXPLODED VIEWS

NOTE:
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of the electrical parts list.

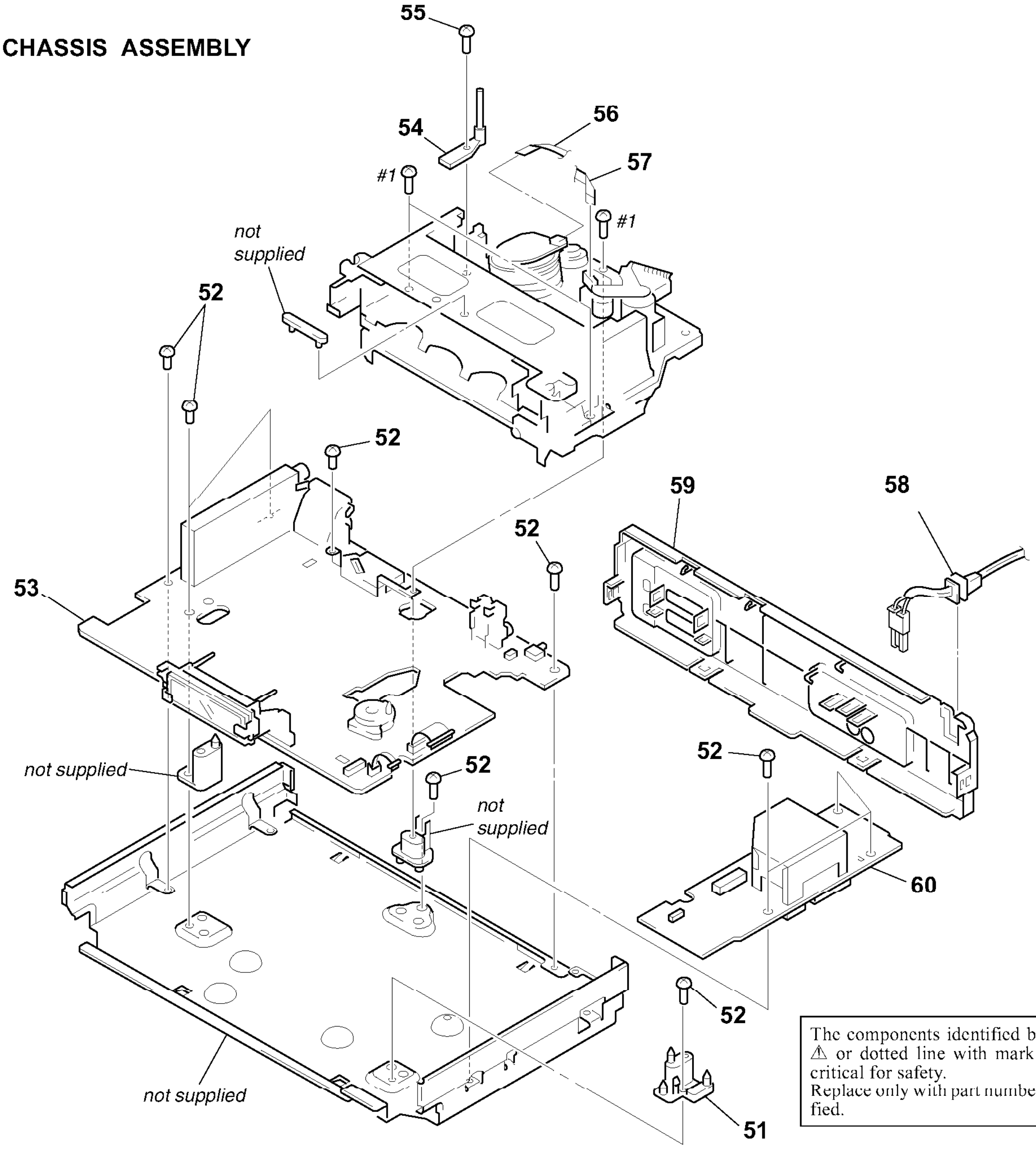
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

### 8-1-1. FRONT PANEL AND CABINET ASSEMBLIES



| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 1 | X-3950-127-1 | PANEL ASSY, FRONT (SE350) | |
| 1 | X-3950-128-1 | PANEL ASSY, FRONT (SE500R) | |
| 1 | X-3950-129-1 | PANEL ASSY, FRONT (SE500K) | |
| 1 | X-3950-130-1 | PANEL ASSY, FRONT (SE600: A, E) | |
| 1 | X-3950-132-1 | PANEL ASSY, FRONT (SX600) | |
| 1 | X-3950-133-1 | PANEL ASSY, FRONT (SE650) | |
| 1 | X-3950-134-1 | PANEL ASSY, FRONT (SE700G) (BLACK) | |
| 1 | X-3950-135-1 | PANEL ASSY, FRONT (SE700: D1, D2, E1, E2) | |
| 1 | X-3950-139-1 | PANEL ASSY, FRONT (SE700: G, I) (GRAY) | |
| 1 | X-3950-141-1 | PANEL ASSY, FRONT (SX700: D, E) | |
| 1 | X-3950-143-1 | PANEL ASSY, FRONT (SE700R) | |
| 1 | X-3950-144-1 | PANEL ASSY, FRONT (SE700N) | |
| 1 | X-3950-145-1 | PANEL ASSY, FRONT (SE700K) | |
| 1 | X-3950-146-1 | PANEL ASSY, FRONT (SE600N) | |
| 1 | X-3950-147-1 | PANEL ASSY, FRONT (SE800N) | |
| 1 | X-3950-148-1 | PANEL ASSY, FRONT (SE800K) | |
| 1 | X-3950-165-1 | PANEL ASSY, FRONT (H) (SE800: D1, D2, E) | |
| 1 | X-3950-168-1 | PANEL ASSY, FRONT (SE800B) | |
| 1 | X-3950-169-1 | PANEL ASSY, FRONT (SE800G) | |
| 1 | X-3950-170-1 | PANEL ASSY, FRONT (SX800) | |
| 1 | X-3950-201-1 | PANEL ASSY, FRONT (SE700B) | |
| 1 | X-3950-202-1 | PANEL ASSY, FRONT (SX700B) | |
| 1 | X-3950-203-1 | PANEL ASSY, FRONT (SE600B) | |
| 2 | 3-057-802-01 | BUTTON (H), CENTER (SE800: D1, D2, E, G) | |
| 2 | 3-057-802-11 | BUTTON (H), CENTER (SE500/SE800: K, N) | |
| 2 | 3-057-802-21 | BUTTON (H), CENTER (SE800B) | |
| 2 | 3-057-802-31 | BUTTON (H), CENTER (SX800) | |
| 3 | 3-057-801-01 | RING (H), CHANGE SPEED (SE800: B, D1, D2, E, G) | |
| 3 | 3-057-801-11 | RING (H), CHANGE SPEED (SE500/SE800: K, N) | |
| 3 | 3-057-801-21 | RING (H), CHANGE SPEED (SX800) | |
| 4 | 3-057-803-01 | DIAL, KK (SE800: B, D1, D2, E, G) | |
| 4 | 3-057-803-11 | DIAL, KK (SE800: K, N/SX800) | |
| 5 | 3-055-077-01 | SPRING, ETR (P5) (SE800/SX800) | |
| 6 | 3-978-737-11 | CUSHION (FP), RUBBER (SE800: B, D1, D2, E, G/SX800) | |
| * 7 | A-6794-749-A | JK-180 BOARD, COMPLETE (SE800: B, D1, D2, E, G/SX800) | |
| * 7 | A-6794-752-A | JK-180 BOARD, COMPLETE (SE800: K, N) | |
| * 7 | A-6794-755-A | JK-180 BOARD, COMPLETE (SE500) | |
| 8 | 3-057-807-01 | PLATE, JK EARTH (SE500/SE800/SX800) | |
| 9 | 4-921-277-41 | SCREW (B2.6X8), TAPPING, BIND | |
| 10 | 3-953-432-01 | SPRING (GE), FL | |
| 11 | 3-057-808-21 | CASE, UPPER (SE700: G, I/SX600/SX700) (GRAY) | |
| 11 | 3-057-808-31 | CASE, UPPER (SE350/SE500/SE600/SE650/SE700: B, D1, D2, E1, E2, G, K, N, R/SE800: K, N) (BLACK) | |
| 11 | 3-058-350-21 | CASE, UPPER (SE800: B, D1, D2, E, G) | |
| 11 | 3-058-350-31 | CASE, UPPER (SX800) | |
| 12 | 3-363-099-01 | SCREW (CASE 3 TP2) (EXCEPT SE700: G, I/SE800: B, D1, D2, E, G/SX600/SX700) (BLACK) | |
| 12 | 3-363-099-11 | SCREW (CASE 3 TP2) (SE700: G, I/SE800: B, D1, D2, E, G/SX600/SX700) (GRAY) | |
| 13 | 1-792-020-11 | CABLE, FLAT (FDS-7) (SE500/SE800/SX800) | |
| 13 | 1-792-021-11 | CABLE, FLAT (FDS-8) (EXCEPT SE500/SE800/SX800) | |
| * 14 | A-6794-748-A | DS-91 BOARD, COMPLETE (SE350/SE600/SE650/SE700/SX600/SX700) | |
| * 14 | A-6794-751-A | DS-91 BOARD, COMPLETE (SE800: B, D1, D2, E, G/SX800) | |
| * 14 | A-6794-754-A | DS-91 BOARD, COMPLETE (SE800: K, N) | |
| * 14 | A-6794-756-A | DS-91 BOARD, COMPLETE (SE500) | |
| 15 | 1-762-844-31 | SWITCH, ROTARY (SE500/SE800/SX800) | |
| * 16 | A-6794-750-A | KK-23 BOARD, COMPLETE (SE800: B, D1, D2, E, G/SX800) | |
| * 16 | A-6794-753-A | KK-23 BOARD, COMPLETE (SE800: K, N) | |
| 17 | 3-053-395-01 | INSULATOR | |
| 18 | 1-418-010-11 | COMMANDER, STANDARD (RMT-V259) (SE500/SE700: D1, D2, E1, E2, K, N, R/SE800: K, N/SX800) | |
| 18 | 1-418-010-21 | COMMANDER, STANDARD (RMT-V259A) (SE700B) | |
| 18 | 1-418-780-11 | COMMANDER, STANDARD (RMT-V288) (SE350/SE600: A, E, N/SE650/SX600) | |
| 18 | 1-418-780-21 | COMMANDER, STANDARD (RMT-V288A) (SE600B) | |
| 18 | 1-418-782-11 | COMMANDER, STANDARD (RMT-V259K) (SE700: G, I/SE800: D1, D2, E/SX700: D, E) | |
| 18 | 1-418-782-21 | COMMANDER, STANDARD (RMT-V259L) (SE800: B, G/SX700B) | |
| 19 | 3-709-430-01 | COVER, REMOTE CONTROL (for RMT-V288/V288A/V259/V259A) (EXCEPT SE700: G, I/SE800: B, D1, D2, E, G/SX700) | |
| 19 | 3-709-430-11 | COVER, REMOTE CONTROL (for RMT-V259L/V259K) (SE700: G, I/SE800: B, D1, D2, E, G/SX700) | |
| 20 | 3-709-431-01 | COVER, REMOTE CONTROL BATTERY (for RMT-V288/288A/V259/V259A) (EXCEPT SE700: G, I/SE800: B, D1, D2, E, G/SX700) | |
| 20 | 3-709-431-11 | COVER, REMOTE CONTROL BATTERY (for RMT-V259L/V259K) (SE700: G, I/SE800: B, D1, D2, E, G/SX700) | |
| 22 | 3-057-795-11 | HOLDER, JK (SE800: K, N/SX800) | |
| 22 | 3-057-795-21 | HOLDER, JK (SE500) | |
| 23 | 3-057-796-11 | CAP, JK (SE500/SE800: K, N/SX800) | |

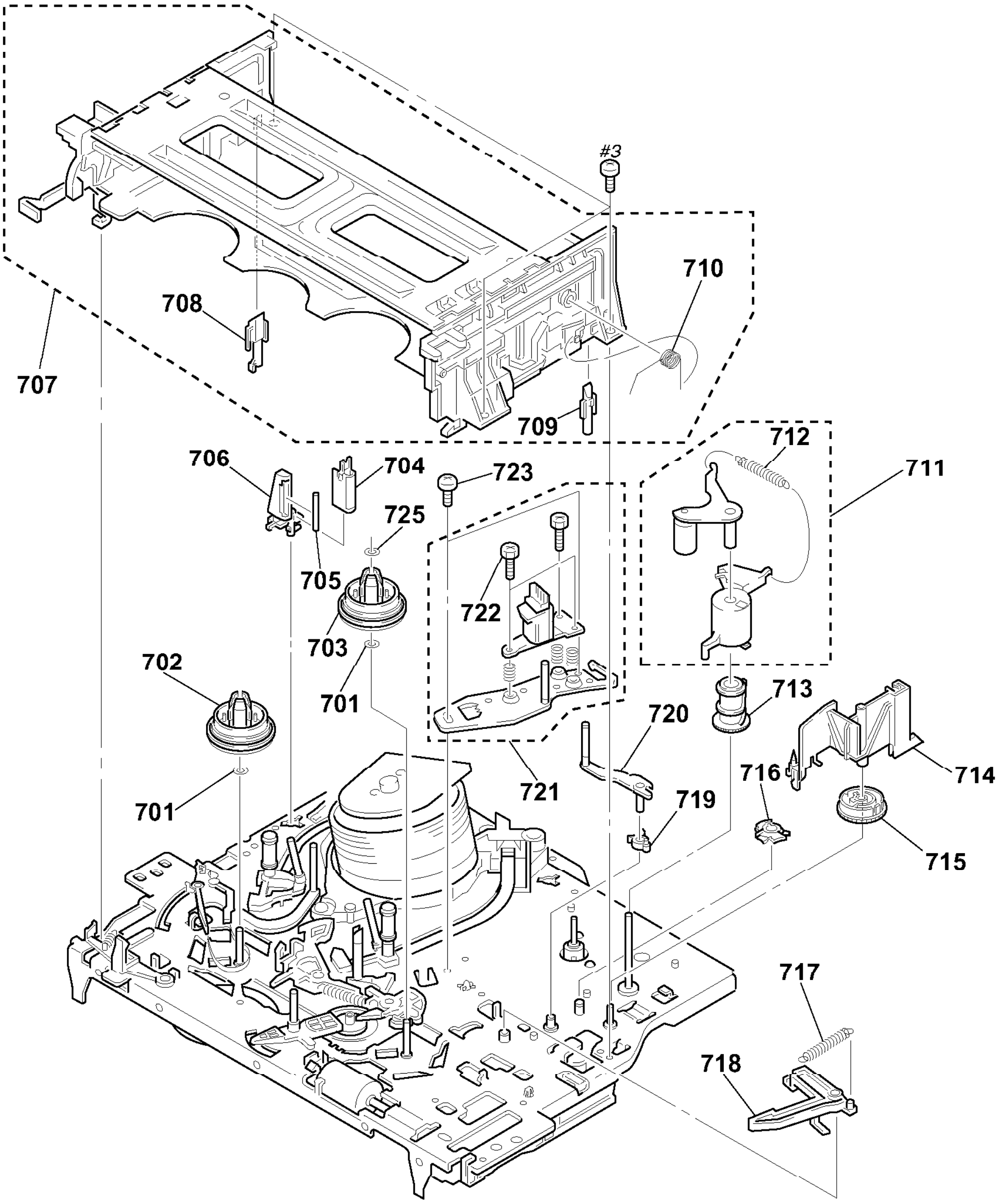
## 8-1-2. CHASSIS ASSEMBLY



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 51 | 3-057-805-01 | BASE, MD (R), KS | |
| 52 | 3-970-608-21 | SUMITITE (B3), +BV | |
| * 53 | A-6713-579-A | MA-373 BOARD, COMPLETE (SE700B/SX700B) | |
| * 53 | A-6713-580-A | MA-373 BOARD, COMPLETE (SE800B) | |
| * 53 | A-6713-581-A | MA-373 BOARD, COMPLETE (SE800K) | |
| * 53 | A-6713-582-A | MA-373 BOARD, COMPLETE (SE800G) | |
| * 53 | A-6713-583-A | MA-373 BOARD, COMPLETE (SE700G) | |
| * 53 | A-6713-584-A | MA-373 BOARD, COMPLETE (SE600B) | |
| * 53 | A-6713-585-A | MA-373 BOARD, COMPLETE (SE500R) | |
| * 53 | A-6713-586-A | MA-373 BOARD, COMPLETE (SE700R) | |
| * 53 | A-6713-587-A | MA-373 BOARD, COMPLETE (SE350) | |
| * 53 | A-6713-588-A | MA-373 BOARD, COMPLETE (SE500K) | |
| * 53 | A-6713-589-A | MA-373 BOARD, COMPLETE (SE600A) | |
| * 53 | A-6713-590-A | MA-373 BOARD, COMPLETE (SE600E/SX600) | |
| * 53 | A-6713-591-A | MA-373 BOARD, COMPLETE (SE650/SE700: D1, D2/SX700D) | |
| * 53 | A-6713-592-A | MA-373 BOARD, COMPLETE (SE700: E1, E2/SX700E) | |
| * 53 | A-6713-593-A | MA-373 BOARD, COMPLETE (SE700I) | |
| * 53 | A-6713-594-A | MA-373 BOARD, COMPLETE (SE800: D1, D2/SX800) | |
| * 53 | A-6713-595-A | MA-373 BOARD, COMPLETE (SE800N) | |
| * 53 | A-6713-596-A | MA-373 BOARD, COMPLETE (SE800E) | |
| * 53 | A-6713-597-A | MA-373 BOARD, COMPLETE (SE700N) | |
| * 53 | A-6713-598-A | MA-373 BOARD, COMPLETE (SE700K) | |
| * 53 | A-6713-599-A | MA-373 BOARD, COMPLETE (SE600N) | |
| 54 | X-3949-549-1 | TGO ASSY (MSR) | |
| 55 | 3-979-112-01 | SCREW SW (+) BVTP 3X10 | |
| 56 | 1-792-022-11 | CABLE, FLAT (FFM-001) | |
| 57 | 1-792-018-11 | CABLE, FLAT (FAC-8) | |
| ⚠58 | 1-782-012-11 | CORD, POWER | |
| 59 | 3-057-809-01 | PANEL, REAR (SE650/SE700: B, D1, D2, E1, E2, K, N/SX700) | |
| 59 | 3-057-809-11 | PANEL, REAR (SE500R) | |
| 59 | 3-057-809-21 | PANEL, REAR (SE500K) | |
| 59 | 3-057-809-31 | PANEL, REAR (SE800G) | |
| 59 | 3-057-809-41 | PANEL, REAR (SE800K) | |
| 59 | 3-057-809-51 | PANEL, REAR (SE700: G, I) | |
| 59 | 3-057-809-61 | PANEL, REAR (SE350/SE600: A, N) | |
| 59 | 3-057-809-71 | PANEL, REAR (SE600: B, E/SX600) | |
| 59 | 3-057-809-81 | PANEL, REAR (SE700R) | |
| 59 | 3-057-809-91 | PANEL, REAR (SE800: B, D1, D2, E, N/SX800) | |
| 60 | 1-468-458-11 | POWER BLOCK (SRV938EK) | |

## 8-1-3. MECHANISM CHASSIS ASSEMBLY (1)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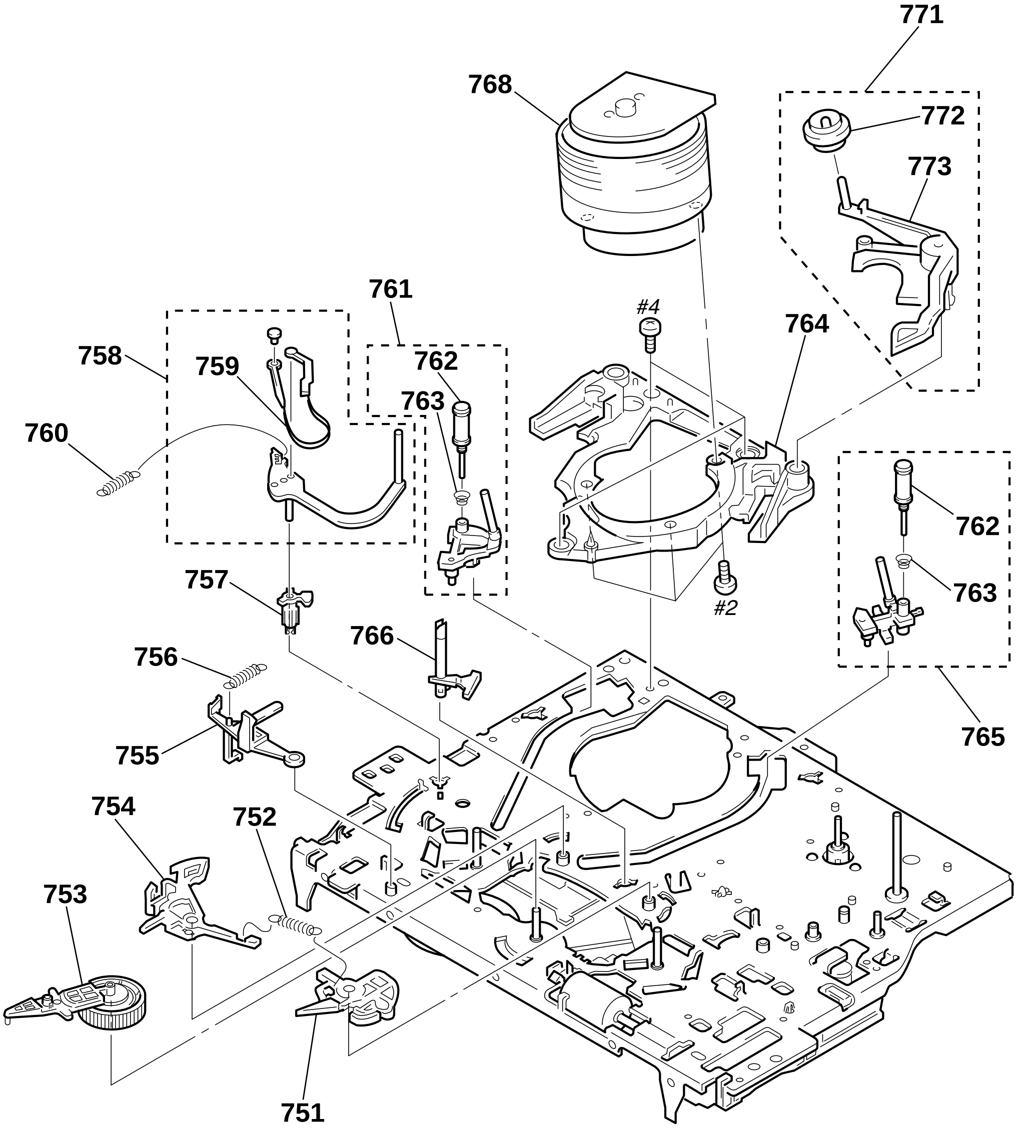
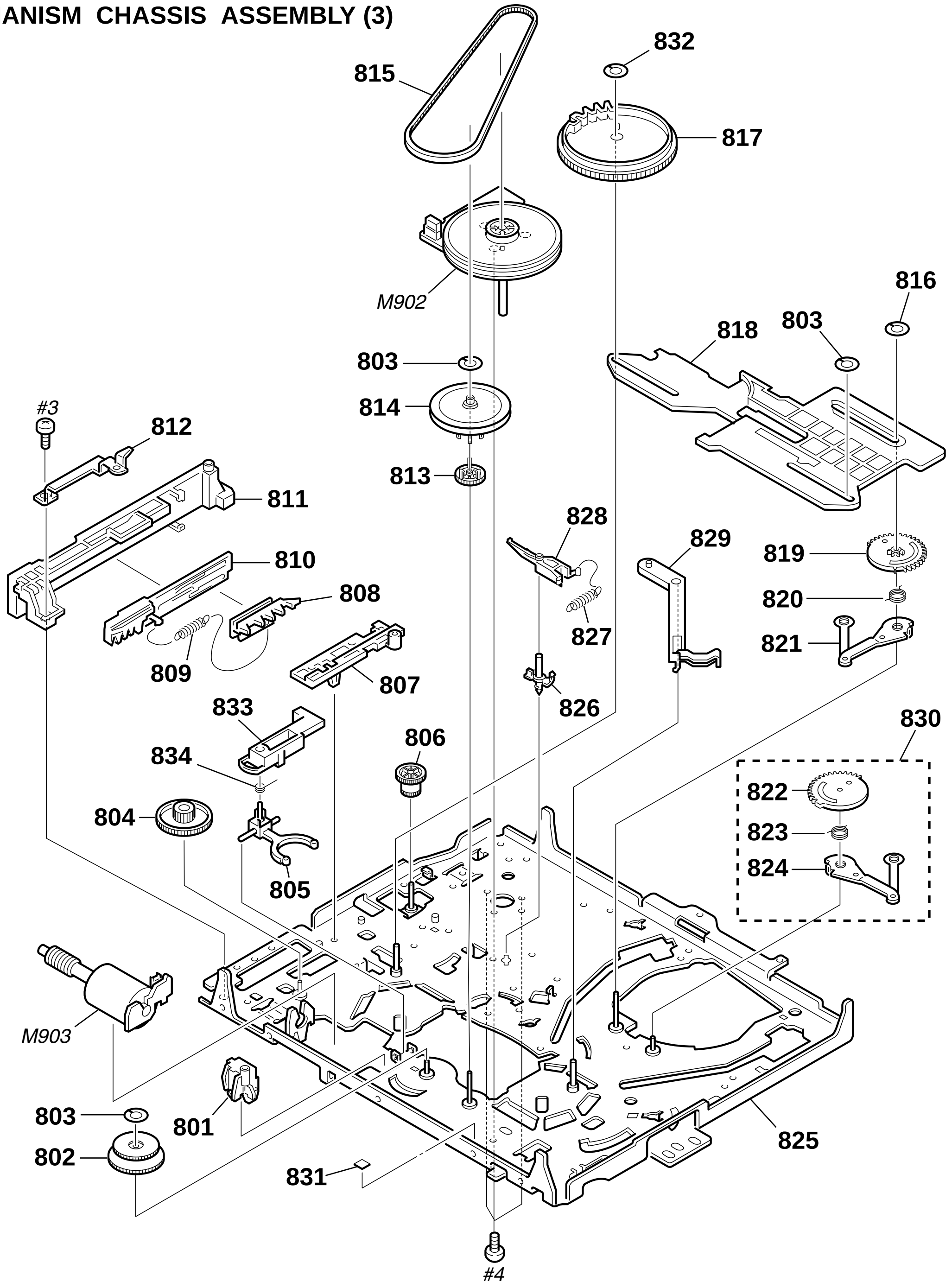
| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 701 | 3-977-509-01 | WASHER, THRUST | |
| 702 | 3-977-507-01 | TABLE, REEL (S) | |
| 703 | 3-977-508-01 | TABLE, REEL (T) | |
| 704 | 1-500-144-11 | HEAD, FE | |
| 705 | 3-977-495-01 | SHAFT TG2 | |
| 706 | 3-977-494-01 | HOLDER, FEH | |
| 707 | A-6759-619-B | FL COMPLETE ASSY | |
| 708 | 3-977-535-01 | PLATE, LUMINOUS (END SENSOR) | |
| 709 | 3-977-536-01 | PLATE, LUMINOUS (TOP SENSOR) | |
| 710 | 3-970-471-01 | SPRING (DECK OPEN), TORSION | |
| 711 | A-6759-863-B | PRESS BLOCK ASSY, PINCH | |
| 712 | 3-958-455-01 | SPRING (PINCH), TENSION | |
| 713 | 3-977-447-01 | GEAR, ELEVATOR | |
| 714 | 3-977-514-01 | OPENER, LID | |
| 715 | 3-977-441-03 | GEAR, PINCH PRESSING | |
| 716 | 3-977-445-02 | GEAR, TG8 ARM DRIVING | |
| 717 | 3-977-465-01 | SPRING, EXTENSION (RVS BRAKE) | |
| 718 | X-3947-582-1 | ARM ASSY, RVS BRAKE | |
| 720 | X-3947-590-1 | TG8 ASSY | |
| 721 | A-6775-791-A | HEAD BLOCK ASSY, ACE FFC | |
| 722 | 3-974-556-11 | +HEXA TT 2.6X9 (TAPER) | |
| 723 | 3-979-508-01 | SCREW +HEXA TP SW 3X8 | |
| 725 | 3-977-443-01 | WASHER, STOPPER | |

## 8-1-4. MECHANISM CHASSIS ASSEMBLY (2)



| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 751 | X-3949-363-1 | BRAKE ASSY, MAIN (T) | |
| 752 | 3-053-882-01 | SPRING, TENS (MAIN BRAKE) | |
| 753 | X-3947-573-1 | ARM ASSY, PENDULUM | |
| 754 | X-3949-362-1 | BRAKE ASSY, MAIN (S) | |
| 755 | 3-977-513-02 | LEVER, REC. PROOF | |
| 756 | 3-976-767-01 | SPRING, TENS. (REC. PROOF) | |
| 757 | 3-977-487-01 | BOSS, TG1 FULCRUM | |
| 758 | X-3950-427-1 | TG1 ASSY (SD) | |
| 759 | X-3950-373-1 | BAND ASSY, TG1 (SD) | |
| 760 | 3-977-488-01 | SPRING (POWER TENSION) | |
| 761 | A-6750-324-A | SHUTTLE (S) BLOCK ASSY | |
| 762 | X-3948-050-1 | ROLLER ASSY, GUIDE | |
| 763 | 3-965-178-01 | SPRING | |
| 764 | 3-969-632-04 | BASE, DRUM | |
| 765 | A-6750-328-E | SHUTTLE (T) BLOCK ASSY | |
| 766 | 3-977-501-01 | PLATE, LUMINOUS | |
| 768 | 1-772-361-11 | DRUM ASSY, DZH-92D (SE350) | |
| 768 | 1-772-362-11 | DRUM ASSY, DZH-93D (SE500) | |
| 768 | 1-772-364-11 | DRUM ASSY, DZH-0B5A (EXCEPT SE350/ SE500/SE600B/SE700B/SE800B/SX700B) | |
| 768 | 1-772-365-11 | DRUM ASSY, DZH-0B6A (SE600B/SE700B/SE800B/SX700B) | |
| 771 | A-6746-074-G | ROLLER BLOCK ASSY, HC | |
| 772 | X-3947-255-1 | ROLLER ASSY, HC | |
| 773 | 3-975-724-07 | ARM, HC | |

## 8-1-5. MECHANISM CHASSIS ASSEMBLY (3)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| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 801 | 3-977-437-01 | RETAINER, CAM MOTOR | |
| 802 | X-3949-364-1 | ASSY, REEL DIRECT SELECT (B) | |
| 803 | 3-977-443-01 | WASHER, STOPPER | |
| 804 | 3-977-438-01 | WORM - WHEEL | |
| 805 | 3-053-887-01 | ARM, LIMITTER SELECTION | |
| 806 | 3-977-444-01 | GEAR, PINCH TRANSMISSION | |
| 807 | 3-977-515-01 | GUIDE, FL SLIDER | |
| 808 | 3-977-517-01 | PLATE, SLIDE, FL | |
| 809 | 3-977-519-01 | SPRING, TENS. (LIMIT, FL) | |
| 810 | 3-977-518-02 | PLATE, LIMITTER, FL | |
| 811 | 3-977-516-01 | HOLDER, FL SLIDER | |
| 812 | 3-977-877-01 | PLATE, RETAINER | |
| 813 | 3-977-504-01 | GEAR, CLUTCH | |
| 814 | X-3949-365-1 | GEAR ASSY PULLEY (B) | |
| 815 | 3-977-510-01 | BELT, RUBBER | |
| 816 | 3-056-824-01 | WASHER, STOPPER | |
| 817 | 3-977-439-01 | GEAR, CAM | |
| 818 | 3-053-878-01 | SLIDER (B) | |
| 819 | 3-977-455-01 | GEAR, LOADING (T) | |
| 820 | 3-977-456-03 | SPRING, TORSION (LOAD T) | |
| 821 | X-3947-579-1 | LEVER ASSY, LOADING (T) | |
| 822 | 3-977-451-01 | GEAR, LOADING (S) | |
| 823 | 3-977-452-01 | SPRING, TORSION (LOAD S) | |
| 824 | X-3947-578-1 | LEVER ASSY, LOADING (S) | |
| 825 | X-3947-576-2 | CHASSIS ASSY, MECHANICAL | |
| 826 | 3-977-468-01 | SHAFT, CAPSTAN BRAKE | |
| 827 | 3-977-467-02 | SPRING, CAP BRAKE | |
| 828 | X-3947-583-1 | BRAKE ASSY, CAPSTAN | |
| 829 | 3-977-489-01 | ARM, TG1 DRIVING | |
| 830 | A-6759-616-A | GEAR BLOCK ASSY, LOADING (S) | |
| 831 | 3-989-917-01 | SPACER (REC PROOF) | |
| 832 | 3-056-952-11 | WASHER, STOPPER | |
| 833 | 3-053-888-01 | BASE, DIRECT SELECT (B) | |
| 834 | 3-053-889-01 | SPRING, TORSLON (DIRECT SELECT) | |
| M902 | 1-698-971-11 | MOTOR, DC (CAPSTAN) | |
| M903 | X-3947-577-1 | MOTOR ASSY, CAM | |

## 8-2. ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F: nonflammable
- Items marked “*” are not stocked since they are seldom required for routine service.
  Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: μ, for example:
  uA. . : μA. . uPA. . : μPA. .
  uPB. . : μPB. . uPC. . : μPC. .
  uPD. . : μPD. .
- CAPACITORS
  uF: μF
- COILS
  uH: μH
- Not all of the parts for POWER BLOCK (SRV938EK) are listed.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board.

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| * | A-6794-748-A | DS-91 BOARD, COMPLETE | |
| | | | (SE350/SE600/SE650/SE700/SX600/SX700) |
| * | A-6794-751-A | DS-91 BOARD, COMPLETE | |
| | | | (SE800: B, D1, D2, E, G/SX800) |
| * | A-6794-754-A | DS-91 BOARD, COMPLETE (SE800: K, N) | |
| * | A-6794-756-A | DS-91 BOARD, COMPLETE (SE500) | |
| | | ********************** | |
| | | | (Ref.No. 1,000 Series) |
| | | < CONNECTOR > | |
| CN450 | 1-784-447-11 | CONNECTOR, FFC/FPC 5P | |
| | | | (SE500/SE800/SX800) |
| CN451 | 1-563-614-31 | HOUSING, CONNECTOR 11P | |
| | | | (SE500/SE800/SX800) |
| * CN452 | 1-568-942-11 | PIN, CONNECTOR 4P (SE800/SX800) | |
| CN453 | 1-691-064-31 | HOUSING, CONNECTOR 5P | |
| | | | (EXCEPT SE500/SE800/SX800) |
| | | < DIODE > | |
| D450 | 8-719-056-06 | DIODE SLR-342DCT31 (JOG) | |
| | | | (SE500/SE800/SX800) |
| | | < TRANSISTOR > | |
| Q450 | 8-729-043-29 | TRANSISTOR PDTC144EK-115 | |
| | | | (SE500/SE800/SX800) |
| | | < RESISTOR > | |
| R450 | 1-216-041-00 | METAL CHIP 470 5% 1/10W | |
| | | | (SE500/SE800/SX800) |
| R451 | 1-216-057-00 | METAL CHIP 2.2K 5% 1/10W | |
| R452 | 1-216-049-91 | RES, CHIP 1K 5% 1/10W | |
| R453 | 1-216-053-00 | METAL CHIP 1.5K 5% 1/10W | |
| R454 | 1-216-057-00 | METAL CHIP 2.2K 5% 1/10W | |
| R455 | 1-216-061-00 | METAL CHIP 3.3K 5% 1/10W | |
| R456 | 1-216-065-91 | RES, CHIP 4.7K 5% 1/10W | |
| | | < SWITCH > | |
| S450 | 1-771-410-21 | SWITCH, TACT (REC ●) | |
| S451 | 1-771-410-21 | SWITCH, TACT (◀◀) | |
| S452 | 1-771-410-21 | SWITCH, TACT (STOP ■) | |
| | | | (EXCEPT SE500/SE800/SX800) |
| S453 | 1-771-410-21 | SWITCH, TACT (PLAY ▷) | |
| | | | (EXCEPT SE500/SE800/SX800) |
| S454 | 1-771-410-21 | SWITCH, TACT (JOG) (SE500/SE800/SX800) | |
| S455 | 1-771-410-21 | SWITCH, TACT (▶▶) | |
| S456 | 1-771-410-21 | SWITCH, TACT (❚❚) | |

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| * | A-6794-749-A | JK-180 BOARD, COMPLETE | |
| | | | (SE800: B, D1, D2, E, G/SX800) |
| * | A-6794-752-A | JK-180 BOARD, COMPLETE (SE800: K, N) | |
| * | A-6794-755-A | JK-180 BOARD, COMPLETE (SE500) | |
| | | *********************** | |
| | | | (Ref.No. 1,000 Series) |
| | | < CAPACITOR > | |
| C481 | 1-163-009-11 | CERAMIC CHIP 0.001uF 10% 50V | |
| C491 | 1-163-009-11 | CERAMIC CHIP 0.001uF 10% 50V | |
| C493 | 1-163-009-11 | CERAMIC CHIP 0.001uF 10% 50V | |
| | | | (SE800/SX800) |
| | | < DIODE > | |
| D480 | 8-719-070-59 | DIODE PDZ6.8B-115 | |
| D481 | 8-719-067-40 | DIODE STZ6.8N-T146 | |
| D490 | 8-719-067-40 | DIODE STZ6.8N-T146 | |
| D491 | 8-719-067-40 | DIODE STZ6.8N-T146 (SE800/SX800) | |
| | | < JACK > | |
| J481 | 1-774-509-11 | JACK, PIN 3P (LINE-2 IN) (SE800/SX800) | |
| J481 | 1-774-510-11 | JACK, PIN 2P (LINE-2 IN) (SE500) | |
| | | < SHORT > | |
| JS480 | 1-216-295-91 | SHORT 0 (SE500) | |
| JS494 | 1-216-296-91 | SHORT 0 (SE500) | |
| | | < RESISTOR > | |
| R480 | 1-216-022-00 | METAL CHIP 75 5% 1/10W | |
| R490 | 1-216-041-00 | METAL CHIP 470 5% 1/10W | |
| R491 | 1-216-041-00 | METAL CHIP 470 5% 1/10W | |
| | | | (SE800/SX800) |

## KK-23 MA-373

| Ref. No. | Part No. | Description | | | | Remark |
|---|---|---|---|---|---|---|
| * | A-6794-750-A | KK-23 BOARD, COMPLETE | | | | (SE800: B, D1, D2, E, G/SX800) |
| * | A-6794-753-A | KK-23 BOARD, COMPLETE (SE800: K, N) | | | | |
| | | ********************** | | | | |
| | | | | | | (Ref.No. 1,000 Series) |
| | | < SWITCH > | | | | |
| S410 | 1-418-156-11 | ENCODER, ROTARYRY (DIAL TIMER) | | | | |
| * | A-6713-579-A | MA-373 BOARD, COMPLETE | | | | (SE700B/SX700B) |
| * | A-6713-580-A | MA-373 BOARD, COMPLETE (SE800B) | | | | |
| * | A-6713-581-A | MA-373 BOARD, COMPLETE (SE800K) | | | | |
| * | A-6713-582-A | MA-373 BOARD, COMPLETE (SE800G) | | | | |
| * | A-6713-583-A | MA-373 BOARD, COMPLETE (SE700G) | | | | |
| * | A-6713-584-A | MA-373 BOARD, COMPLETE (SE600B) | | | | |
| * | A-6713-585-A | MA-373 BOARD, COMPLETE (SE500R) | | | | |
| * | A-6713-586-A | MA-373 BOARD, COMPLETE (SE700R) | | | | |
| * | A-6713-587-A | MA-373 BOARD, COMPLETE (SE350) | | | | |
| * | A-6713-588-A | MA-373 BOARD, COMPLETE (SE500K) | | | | |
| * | A-6713-589-A | MA-373 BOARD, COMPLETE (SE600A) | | | | |
| * | A-6713-590-A | MA-373 BOARD, COMPLETE (SE600E/SX600) | | | | |
| * | A-6713-591-A | MA-373 BOARD, COMPLETE | | | | (SE650/SE700: D1, D2/SX700D) |
| * | A-6713-592-A | MA-373 BOARD, COMPLETE | | | | (SE700: E1, E2/SX700E) |
| * | A-6713-593-A | MA-373 BOARD, COMPLETE (SE700I) | | | | |
| * | A-6713-594-A | MA-373 BOARD, COMPLETE | | | | (SE800: D1, D2/SX800) |
| * | A-6713-595-A | MA-373 BOARD, COMPLETE (SE800N) | | | | |
| * | A-6713-596-A | MA-373 BOARD, COMPLETE (SE800E) | | | | |
| * | A-6713-597-A | MA-373 BOARD, COMPLETE (SE700N) | | | | |
| * | A-6713-598-A | MA-373 BOARD, COMPLETE (SE700K) | | | | |
| * | A-6713-599-A | MA-373 BOARD, COMPLETE (SE600N) | | | | |
| | | *********************** | | | | |
| | | | | | | (Ref.No. 1,000 Series) |
| | 3-057-806-01 | BASE, FL | | | | (EXCEPT SE800: B, D1, D2, E, G/SX800) |
| | 3-057-806-11 | BASE, FL (SE800: B, D1, D2, E, G/SX800) | | | | |
| | 3-058-480-01 | HOLDER, FLO | | | | (EXCEPT SE800: B, D1, D2, E, G/SX800) |
| | 3-058-480-11 | HOLDER, FLO (SE800: B, D1, D2, E, G/SX800) | | | | |
| * | 3-960-273-01 | SPACER, TOP END | | | | |
| * | 3-960-274-01 | SPACER, LED | | | | |
| | | < CAPACITOR > | | | | |
| C001 | 1-163-021-91 | CERAMIC CHIP | 0.01uF | 10% | 50V | (SE500/SE650/SE700/SE800/SX700/SX800) |
| C002 | 1-124-584-00 | ELECT | 100uF | 20% | 10V | (SE500/SE650/SE700/SE800/SX700/SX800) |
| C003 | 1-109-982-11 | CERAMIC CHIP | 1uF | 10% | 10V | (SE500/SE650/SE700/SE800/SX700/SX800) |
| C004 | 1-124-259-11 | ELECT | 4.7uF | 20% | 16V | (SE500/SE650/SE700/SE800/SX700/SX800) |
| C006 | 1-110-501-11 | CERAMIC CHIP | 0.33uF | 10% | 16V | (SE500/SE650/SE700/SE800/SX700/SX800) |
| C007 | 1-126-157-11 | ELECT | 10uF | 20% | 16V | (SE500/SE650/SE700/SE800/SX700/SX800) |
| C008 | 1-163-021-91 | CERAMIC CHIP | 0.01uF | 10% | 50V | (SE500/SE650/SE700/SE800/SX700/SX800) |
| C009 | 1-163-021-91 | CERAMIC CHIP | 0.01uF | 10% | 50V | (SE500/SE650/SE700/SE800/SX700/SX800) |

| Ref. No. | Part No. | Description | | | | Remark |
|---|---|---|---|---|---|---|
| C010 | 1-163-021-91 | CERAMIC CHIP | 0.01uF | 10% | 50V | (SE500/SE650/SE700/SE800/SX700/SX800) |
| C100 | 1-163-009-11 | CERAMIC CHIP | 0.001uF | 10% | 50V | |
| C101 | 1-163-009-11 | CERAMIC CHIP | 0.001uF | 10% | 50V | |
| C102 | 1-163-009-11 | CERAMIC CHIP | 0.001uF | 10% | 50V | |
| C103 | 1-128-057-11 | ELECT | 330uF | 20% | 6.3V | |
| C105 | 1-163-009-11 | CERAMIC CHIP | 0.001uF | 10% | 50V | |
| C107 | 1-104-664-11 | ELECT | 47uF | 20% | 16V | |
| C108 | 1-127-573-91 | CERAMIC CHIP | 1uF | 10% | 16V | (SE350/SE500) |
| C113 | 1-163-021-91 | CERAMIC CHIP | 0.01uF | 10% | 50V | |
| C114 | 1-163-021-91 | CERAMIC CHIP | 0.01uF | 10% | 50V | |
| C115 | 1-163-038-91 | CERAMIC CHIP | 0.1uF | | 25V | |
| C120 | 1-163-021-91 | CERAMIC CHIP | 0.01uF | 10% | 50V | |
| C121 | 1-163-021-91 | CERAMIC CHIP | 0.01uF | 10% | 50V | |
| C122 | 1-104-664-11 | ELECT | 47uF | 20% | 16V | |
| C123 | 1-163-021-91 | CERAMIC CHIP | 0.01uF | 10% | 50V | |
| C131 | 1-124-589-11 | ELECT | 47uF | 20% | 16V | |
| C133 | 1-164-004-11 | CERAMIC CHIP | 0.1uF | 10% | 25V | |
| C134 | 1-164-004-11 | CERAMIC CHIP | 0.1uF | 10% | 25V | |
| C140 | 1-126-933-11 | ELECT | 100uF | 20% | 16V | |
| C141 | 1-163-021-91 | CERAMIC CHIP | 0.01uF | 10% | 50V | |
| C142 | 1-163-037-11 | CERAMIC CHIP | 0.022uF | 10% | 25V | |
| C143 | 1-126-965-11 | ELECT | 22uF | 20% | 50V | |
| C144 | 1-126-965-11 | ELECT | 22uF | 20% | 50V | |
| C145 | 1-126-933-11 | ELECT | 100uF | 20% | 16V | |
| C146 | 1-164-161-11 | CERAMIC CHIP | 0.0022uF | 10% | 100V | |
| C147 | 1-164-004-11 | CERAMIC CHIP | 0.1uF | 10% | 25V | (SE500/SE800/SX800) |
| C148 | 1-163-021-91 | CERAMIC CHIP | 0.01uF | 10% | 50V | |
| C149 | 1-126-934-11 | ELECT | 220uF | 20% | 16V | |
| C150 | 1-126-963-11 | ELECT | 4.7uF | 20% | 50V | |
| C160 | 1-163-021-91 | CERAMIC CHIP | 0.01uF | 10% | 50V | |
| C161 | 1-163-021-91 | CERAMIC CHIP | 0.01uF | 10% | 50V | |
| C162 | 1-104-905-11 | CAPACITOR | 0.22F | | 5.5V | |
| C163 | 1-163-021-91 | CERAMIC CHIP | 0.01uF | 10% | 50V | |
| C164 | 1-125-972-91 | ELECT | 100uF | 20% | 16V | |
| C165 | 1-163-021-91 | CERAMIC CHIP | 0.01uF | 10% | 50V | |
| C166 | 1-163-021-91 | CERAMIC CHIP | 0.01uF | 10% | 50V | |
| C167 | 1-163-809-11 | CERAMIC CHIP | 0.047uF | 10% | 25V | |
| C168 | 1-163-235-11 | CERAMIC CHIP | 22PF | 5% | 50V | |
| C169 | 1-163-235-11 | CERAMIC CHIP | 22PF | 5% | 50V | |
| C170 | 1-164-004-11 | CERAMIC CHIP | 0.1uF | 10% | 25V | |
| C171 | 1-163-229-11 | CERAMIC CHIP | 12PF | 5% | 50V | |
| C172 | 1-163-231-11 | CERAMIC CHIP | 15PF | 5% | 50V | |
| C173 | 1-163-007-11 | CERAMIC CHIP | 680PF | 10% | 50V | |
| C174 | 1-164-004-11 | CERAMIC CHIP | 0.1uF | 10% | 25V | (EXCEPT SE350/SE500) |
| C200 | 1-163-021-91 | CERAMIC CHIP | 0.01uF | 10% | 50V | |
| C201 | 1-126-160-11 | ELECT | 1uF | 20% | 50V | |
| C202 | 1-163-021-91 | CERAMIC CHIP | 0.01uF | 10% | 50V | |
| C203 | 1-163-809-11 | CERAMIC CHIP | 0.047uF | 10% | 25V | |
| C204 | 1-163-021-91 | CERAMIC CHIP | 0.01uF | 10% | 50V | |
| C205 | 1-163-239-11 | CERAMIC CHIP | 33PF | 5% | 50V | (EXCEPT SE350) |
| C205 | 1-163-241-11 | CERAMIC CHIP | 39PF | 5% | 50V | (SE350) |
| C206 | 1-163-809-11 | CERAMIC CHIP | 0.047uF | 10% | 25V | |
| C207 | 1-163-237-11 | CERAMIC CHIP | 27PF | 5% | 50V | |
| C208 | 1-126-160-11 | ELECT | 1uF | 20% | 50V | |
| C209 | 1-163-257-11 | CERAMIC CHIP | 180PF | 5% | 50V | |

| Ref. No. | Part No. | Description | | | | Remark |
|---|---|---|---|---|---|---|
| C210 | 1-163-237-11 | CERAMIC CHIP | 27PF | 5% | 50V | |
| C211 | 1-109-982-11 | CERAMIC CHIP | 1uF | 10% | 10V | |
| C212 | 1-163-809-11 | CERAMIC CHIP | 0.047uF | 10% | 25V | |
| C213 | 1-109-982-11 | CERAMIC CHIP | 1uF | 10% | 10V | |
| C214 | 1-164-004-11 | CERAMIC CHIP | 0.1uF | 10% | 25V | |
| C215 | 1-163-021-91 | CERAMIC CHIP | 0.01uF | 10% | 50V | |
| C216 | 1-163-037-11 | CERAMIC CHIP | 0.022uF | 10% | 25V | |
| C217 | 1-163-021-91 | CERAMIC CHIP | 0.01uF | 10% | 50V | |
| C218 | 1-163-021-91 | CERAMIC CHIP | 0.01uF | 10% | 50V | (SE350/SE600/SX600) |
| C219 | 1-163-038-91 | CERAMIC CHIP | 0.1uF | | 25V | |
| C220 | 1-124-589-11 | ELECT | 47uF | 20% | 16V | |
| C221 | 1-109-982-11 | CERAMIC CHIP | 1uF | 10% | 10V | (SE350) |
| C221 | 1-164-004-11 | CERAMIC CHIP | 0.1uF | 10% | 25V | (EXCEPT SE350) |
| C222 | 1-109-982-11 | CERAMIC CHIP | 1uF | 10% | 10V | |
| C223 | 1-163-038-91 | CERAMIC CHIP | 0.1uF | | 25V | |
| C224 | 1-163-021-91 | CERAMIC CHIP | 0.01uF | 10% | 50V | |
| C225 | 1-124-589-11 | ELECT | 47uF | 20% | 16V | |
| C226 | 1-163-021-91 | CERAMIC CHIP | 0.01uF | 10% | 50V | |
| C227 | 1-104-664-11 | ELECT | 47uF | 20% | 16V | |
| C228 | 1-163-131-00 | CERAMIC CHIP | 390PF | 5% | 50V | |
| C229 | 1-164-004-11 | CERAMIC CHIP | 0.1uF | 10% | 25V | |
| C230 | 1-163-038-91 | CERAMIC CHIP | 0.1uF | | 25V | |
| C231 | 1-109-982-11 | CERAMIC CHIP | 1uF | 10% | 10V | |
| C232 | 1-109-982-11 | CERAMIC CHIP | 1uF | 10% | 10V | |
| C233 | 1-164-004-11 | CERAMIC CHIP | 0.1uF | 10% | 25V | |
| C234 | 1-163-021-91 | CERAMIC CHIP | 0.01uF | 10% | 50V | |
| C235 | 1-109-982-11 | CERAMIC CHIP | 1uF | 10% | 10V | |
| C236 | 1-163-243-11 | CERAMIC CHIP | 47PF | 5% | 50V | |
| C237 | 1-164-004-11 | CERAMIC CHIP | 0.1uF | 10% | 25V | |
| C238 | 1-126-157-11 | ELECT | 10uF | 20% | 16V | |
| C239 | 1-163-243-11 | CERAMIC CHIP | 47PF | 5% | 50V | (SE500/SE800/SX800) |
| C240 | 1-163-243-11 | CERAMIC CHIP | 47PF | 5% | 50V | (EXCEPT SE350/SE500R/SE600: A, N/SE700R) |
| C241 | 1-164-004-11 | CERAMIC CHIP | 0.1uF | 10% | 25V | (SE500/SE800/SX800) |
| C242 | 1-164-004-11 | CERAMIC CHIP | 0.1uF | 10% | 25V | (EXCEPT SE350/SE500R/SE600: A, N/SE700R) |
| C243 | 1-163-809-11 | CERAMIC CHIP | 0.047uF | 10% | 25V | |
| C244 | 1-163-021-91 | CERAMIC CHIP | 0.01uF | 10% | 50V | |
| C245 | 1-164-004-11 | CERAMIC CHIP | 0.1uF | 10% | 25V | |
| C246 | 1-163-021-91 | CERAMIC CHIP | 0.01uF | 10% | 50V | |
| C247 | 1-163-021-91 | CERAMIC CHIP | 0.01uF | 10% | 50V | |
| C248 | 1-124-589-11 | ELECT | 47uF | 20% | 16V | |
| C249 | 1-126-157-11 | ELECT | 10uF | 20% | 16V | |
| C250 | 1-124-589-11 | ELECT | 47uF | 20% | 16V | |
| C251 | 1-126-153-11 | ELECT | 22uF | 20% | 6.3V | |
| C252 | 1-109-982-11 | CERAMIC CHIP | 1uF | 10% | 10V | |
| C253 | 1-163-139-00 | CERAMIC CHIP | 820PF | 5% | 50V | (SE600B/SE700B/SE800B/SX700B) |
| C254 | 1-163-021-91 | CERAMIC CHIP | 0.01uF | 10% | 50V | (SE500/SE650/SE700/SE800/SX700/SX800) |
| C255 | 1-163-021-91 | CERAMIC CHIP | 0.01uF | 10% | 50V | |
| C271 | 1-163-021-91 | CERAMIC CHIP | 0.01uF | 10% | 50V | (EXCEPT SE350) |
| C272 | 1-164-004-11 | CERAMIC CHIP | 0.1uF | 10% | 25V | (EXCEPT SE350) |
| C275 | 1-163-021-91 | CERAMIC CHIP | 0.01uF | 10% | 50V | |
| C276 | 1-164-004-11 | CERAMIC CHIP | 0.1uF | 10% | 25V | |
| C278 | 1-163-037-11 | CERAMIC CHIP | 0.022uF | 10% | 25V | |
| C279 | 1-164-004-11 | CERAMIC CHIP | 0.1uF | 10% | 25V | |
| C280 | 1-126-933-11 | ELECT | 100uF | 20% | 16V | |
| C281 | 1-163-021-91 | CERAMIC CHIP | 0.01uF | 10% | 50V | |
| C282 | 1-163-021-91 | CERAMIC CHIP | 0.01uF | 10% | 50V | |
| C283 | 1-163-021-91 | CERAMIC CHIP | 0.01uF | 10% | 50V | |
| C284 | 1-164-489-11 | CERAMIC CHIP | 0.22uF | 10% | 16V | |
| C285 | 1-163-021-91 | CERAMIC CHIP | 0.01uF | 10% | 50V | |
| C288 | 1-163-251-11 | CERAMIC CHIP | 100PF | 5% | 50V | |
| C289 | 1-163-233-11 | CERAMIC CHIP | 18PF | 5% | 50V | |
| C303 | 1-163-038-91 | CERAMIC CHIP | 0.1uF | | 25V | (EXCEPT SE350/SE500) |
| C304 | 1-163-021-91 | CERAMIC CHIP | 0.01uF | 10% | 50V | (EXCEPT SE350/SE500) |
| C306 | 1-104-664-11 | ELECT | 47uF | 20% | 16V | (EXCEPT SE350/SE500) |
| C307 | 1-104-664-11 | ELECT | 47uF | 20% | 16V | (EXCEPT SE350/SE500) |
| C308 | 1-126-964-11 | ELECT | 10uF | 20% | 50V | (EXCEPT SE350/SE500) |
| C309 | 1-163-020-00 | CERAMIC CHIP | 0.0082uF | 10% | 50V | (EXCEPT SE350/SE500) |
| C310 | 1-119-799-11 | ELECT | 47uF | 20% | 16V | (EXCEPT SE350/SE500) |
| C311 | 1-126-964-11 | ELECT | 10uF | 20% | 50V | (EXCEPT SE350/SE500) |
| C312 | 1-126-961-11 | ELECT | 2.2UF | 20% | 50V | (EXCEPT SE350/SE500) |
| C313 | 1-126-964-11 | ELECT | 10uF | 20% | 50V | (EXCEPT SE350/SE500) |
| C314 | 1-119-799-11 | ELECT | 47uF | 20% | 16V | (EXCEPT SE350/SE500) |
| C315 | 1-163-020-00 | CERAMIC CHIP | 0.0082uF | 10% | 50V | (EXCEPT SE350/SE500) |
| C316 | 1-126-964-11 | ELECT | 10uF | 20% | 50V | (EXCEPT SE350/SE500) |
| C317 | 1-164-489-11 | CERAMIC CHIP | 0.22uF | 10% | 16V | (EXCEPT SE350/SE500) |
| C318 | 1-126-964-11 | ELECT | 10uF | 20% | 50V | (EXCEPT SE350/SE500) |
| C319 | 1-124-261-00 | ELECT | 10uF | 20% | 50V | (EXCEPT SE350/SE500) |
| C320 | 1-126-964-11 | ELECT | 10uF | 20% | 50V | (EXCEPT SE350/SE500) |
| C322 | 1-126-964-11 | ELECT | 10uF | 20% | 50V | (EXCEPT SE350/SE500) |
| C323 | 1-163-038-91 | CERAMIC CHIP | 0.1uF | | 25V | (EXCEPT SE350/SE500) |
| C324 | 1-163-021-91 | CERAMIC CHIP | 0.01uF | 10% | 50V | (EXCEPT SE350/SE500) |
| C325 | 1-164-489-11 | CERAMIC CHIP | 0.22uF | 10% | 16V | (EXCEPT SE350/SE500) |
| C326 | 1-164-489-11 | CERAMIC CHIP | 0.22uF | 10% | 16V | (EXCEPT SE350/SE500) |
| C327 | 1-164-489-11 | CERAMIC CHIP | 0.22uF | 10% | 16V | (EXCEPT SE350/SE500) |
| C328 | 1-126-960-11 | ELECT | 1uF | 20% | 50V | (SE800/SX800) |
| C329 | 1-126-960-11 | ELECT | 1uF | 20% | 50V | (SE800/SX800) |
| C330 | 1-126-960-11 | ELECT | 1uF | 20% | 50V | (EXCEPT SE350/SE500) |
| C331 | 1-126-960-11 | ELECT | 1uF | 20% | 50V | (EXCEPT SE350/SE500) |

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| C332 | 1-126-960-11 | ELECT 1uF 20% 50V | (EXCEPT SE350/SE500/SE600: A, N/SE700R) |
| C333 | 1-126-960-11 | ELECT 1uF 20% 50V | (EXCEPT SE350/SE500/SE600: A, N/SE700R) |
| C336 | 1-126-964-11 | ELECT 10uF 20% 50V | (EXCEPT SE350/SE500) |
| C337 | 1-124-261-00 | ELECT 10uF 20% 50V | (EXCEPT SE350/SE500R/SE600: A, N/SE700: G, I, R/SE800G) |
| C338 | 1-124-261-00 | ELECT 10uF 20% 50V | (EXCEPT SE350/SE500/SE600: A, N/SE700: G, I, R/SE800G) |
| C350 | 1-164-489-11 | CERAMIC CHIP 0.22uF 10% 16V | |
| C351 | 1-104-664-11 | ELECT 47uF 20% 16V | |
| C352 | 1-163-038-91 | CERAMIC CHIP 0.1uF 25V | |
| C353 | 1-164-489-11 | CERAMIC CHIP 0.22uF 10% 16V | (SE500) |
| C354 | 1-126-964-11 | ELECT 10uF 20% 50V | |
| C355 | 1-164-489-11 | CERAMIC CHIP 0.22uF 10% 16V | (SE350/SE500) |
| C356 | 1-126-966-11 | ELECT 33uF 20% 16V | |
| C357 | 1-126-963-11 | ELECT 4.7uF 20% 50V | |
| C358 | 1-109-982-11 | CERAMIC CHIP 1uF 10% 10V | |
| C359 | 1-163-011-11 | CERAMIC CHIP 0.0015uF 10% 50V | |
| C360 | 1-163-011-11 | CERAMIC CHIP 0.0015uF 10% 50V | |
| C362 | 1-104-664-11 | ELECT 47uF 20% 16V | |
| C363 | 1-126-963-11 | ELECT 4.7uF 20% 50V | |
| C364 | 1-126-964-11 | ELECT 10uF 20% 50V | |
| C365 | 1-163-021-91 | CERAMIC CHIP 0.01uF 10% 50V | |
| C366 | 1-126-960-11 | ELECT 1uF 20% 50V | |
| C367 | 1-163-021-91 | CERAMIC CHIP 0.01uF 10% 50V | |
| C380 | 1-137-374-11 | MYLAR 0.047uF 5% 50V | (SE350/SE600/SE650/SE700/SX600/SX700) |
| C380 | 1-137-440-11 | MYLAR 0.018uF 5% 50V | (SE500/SE800/SX800) |
| C381 | 1-163-021-91 | CERAMIC CHIP 0.01uF 10% 50V | |
| C382 | 1-163-021-91 | CERAMIC CHIP 0.01uF 10% 50V | |
| C383 | 1-124-589-11 | ELECT 47uF 20% 16V | |
| C390 | 1-137-397-11 | MYLAR 0.047uF 5% 100V | (SE500/SE800/SX800) |
| C391 | 1-163-021-91 | CERAMIC CHIP 0.01uF 10% 50V | (SE500/SE800/SX800) |
| C392 | 1-163-011-11 | CERAMIC CHIP 0.0015uF 10% 50V | (SE500/SE800/SX800) |
| C393 | 1-126-933-11 | ELECT 100uF 20% 16V | (SE500/SE800/SX800) |
| C394 | 1-163-251-11 | CERAMIC CHIP 100PF 5% 50V | (SE500/SE800/SX800) |
| C420 | 1-124-589-11 | ELECT 47uF 20% 16V | |
| C421 | 1-163-235-11 | CERAMIC CHIP 22PF 5% 50V | |
| C422 | 1-164-004-11 | CERAMIC CHIP 0.1uF 10% 25V | |
| C423 | 1-163-021-91 | CERAMIC CHIP 0.01uF 10% 50V | |
| C424 | 1-126-157-11 | ELECT 10uF 20% 16V | |
| C427 | 1-124-635-00 | ELECT 220uF 20% 6.3V | |
| C505 | 1-163-131-00 | CERAMIC CHIP 390PF 5% 50V | |
| C506 | 1-163-131-00 | CERAMIC CHIP 390PF 5% 50V | |
| C507 | 1-163-131-00 | CERAMIC CHIP 390PF 5% 50V | |
| C508 | 1-163-131-00 | CERAMIC CHIP 390PF 5% 50V | (EXCEPT SE350/SE500) |
| C510 | 1-163-021-91 | CERAMIC CHIP 0.01uF 10% 50V | |
| C511 | 1-104-664-11 | ELECT 47uF 20% 16V | |
| C512 | 1-104-664-11 | ELECT 47uF 20% 16V | |
| C513 | 1-126-935-11 | ELECT 470uF 20% 6.3V | |
| C514 | 1-163-239-11 | CERAMIC CHIP 33PF 5% 50V | (SE500R/SE650/SE700/SE800/SX700/SX800) |
| C515 | 1-163-239-11 | CERAMIC CHIP 33PF 5% 50V | (SE650/SE700/SE800/SX700/SX800) |
| C516 | 1-163-017-00 | CERAMIC CHIP 0.0047uF 5% 50V | |
| C520 | 1-126-935-11 | ELECT 470uF 20% 6.3V | (SE500R/SE700R/SE800K) |
| C575 | 1-163-131-00 | CERAMIC CHIP 390PF 5% 50V | (EXCEPT SE350/SE500R/SE600: A, N/SE700R) |
| C576 | 1-163-131-00 | CERAMIC CHIP 390PF 5% 50V | (EXCEPT SE350/SE500R/SE600: A, N/SE700R) |
| C577 | 1-163-131-00 | CERAMIC CHIP 390PF 5% 50V | (EXCEPT SE350/SE500R/SE600: A, N/SE700: G, I, R/SE800G) |
| C578 | 1-163-131-00 | CERAMIC CHIP 390PF 5% 50V | (EXCEPT SE350/SE500/SE600: A, N/SE700: G, I, R/SE800G) |
| C580 | 1-126-964-11 | ELECT 10uF 20% 50V | (SE500K) |
| C581 | 1-126-964-11 | ELECT 10uF 20% 50V | (SE500K) |
| C582 | 1-124-261-00 | ELECT 10uF 20% 50V | (SE500K) |
| C583 | 1-126-964-11 | ELECT 10uF 20% 50V | (SE500K) |
| C584 | 1-164-004-11 | CERAMIC CHIP 0.1uF 10% 25V | (SE500K) |
| C585 | 1-126-964-11 | ELECT 10uF 20% 50V | (SE500K) |
| C586 | 1-126-964-11 | ELECT 10uF 20% 50V | (SE500K) |
| C587 | 1-124-261-00 | ELECT 10uF 20% 50V | (SE500K) |
| C611 | 1-104-664-11 | ELECT 47uF 20% 25V | |
| C612 | 1-163-021-91 | CERAMIC CHIP 0.01uF 10% 50V | |
| C613 | 1-126-933-11 | ELECT 100uF 20% 16V | |
| C618 | 1-126-965-11 | ELECT 22uF 20% 50V | |
| C621 | 1-126-935-11 | ELECT 470uF 20% 6.3V | (EXCEPT SE350/SE500R/SE600: A, N/SE700R) |
| C660 | 1-163-233-11 | CERAMIC CHIP 18PF 5% 50V | |
| C661 | 1-163-233-11 | CERAMIC CHIP 18PF 5% 50V | |
| C662 | 1-163-017-00 | CERAMIC CHIP 0.0047uF 5% 50V | |
| C663 | 1-163-021-91 | CERAMIC CHIP 0.01uF 10% 50V | |
| C664 | 1-164-004-11 | CERAMIC CHIP 0.1uF 10% 25V | |
| C665 | 1-163-245-11 | CERAMIC CHIP 56PF 5% 50V | (SE350/SE500/SE600: B, N/SE700: B, K, N, R/SE800: B, K, N/SX700B) |
| C666 | 1-163-135-00 | CERAMIC CHIP 560PF 5% 50V | |
| C667 | 1-163-021-91 | CERAMIC CHIP 0.01uF 10% 50V | |
| C668 | 1-124-584-00 | ELECT 100uF 20% 10V | |
| C669 | 1-163-016-00 | CERAMIC CHIP 0.0039uF 10% 50V | |
| C670 | 1-109-982-11 | CERAMIC CHIP 1uF 10% 10V | |
| C671 | 1-163-235-11 | CERAMIC CHIP 22PF 5% 50V | |
| C672 | 1-163-021-91 | CERAMIC CHIP 0.01uF 10% 50V | |
| C701 | 1-126-964-11 | ELECT 10uF 20% 50V | |
| C702 | 1-164-161-11 | CERAMIC CHIP 0.0022uF 10% 100V | |
| C704 | 1-126-964-11 | ELECT 10uF 20% 50V | |
| C705 | 1-163-021-91 | CERAMIC CHIP 0.01uF 10% 50V | |
| C708 | 1-104-664-11 | ELECT 47uF 20% 16V | |
| C709 | 1-163-021-91 | CERAMIC CHIP 0.01uF 10% 50V | |
| C710 | 1-126-965-11 | ELECT 22uF 20% 50V | (EXCEPT SE350/SE500/SE700R) |
| C711 | 1-104-664-11 | ELECT 47uF 20% 16V | (EXCEPT SE350/SE500/SE700R) |

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| C730 | 1-126-964-11 | ELECT 10uF 20% 50V | (EXCEPT SE350/SE500) |
| C731 | 1-126-964-11 | ELECT 10uF 20% 50V | (EXCEPT SE350/SE500) |
| C752 | 1-126-933-11 | ELECT 100uF 20% 16V | |
| C753 | 1-164-004-11 | CERAMIC CHIP 0.1uF 10% 25V | |
| C754 | 1-126-935-11 | ELECT 470uF 20% 6.3V | |
| C755 | 1-164-004-11 | CERAMIC CHIP 0.1uF 10% 25V | |
| C757 | 1-163-021-91 | CERAMIC CHIP 0.01uF 10% 50V | |
| C801 | 1-163-021-91 | CERAMIC CHIP 0.01uF 10% 50V | (EXCEPT SE600/SE700R/SX600) |
| C850 | 1-163-038-91 | CERAMIC CHIP 0.1uF 25V | (EXCEPT SE500R/SE600/SE700R/SX600) |
| C851 | 1-126-964-11 | ELECT 10uF 20% 50V | (EXCEPT SE500R/SE600/SE700R/SX600) |
| C852 | 1-164-161-11 | CERAMIC CHIP 0.0022uF 10% 100V | (EXCEPT SE500R/SE600/SE700R/SX600) |
| C853 | 1-163-989-11 | CERAMIC CHIP 0.033uF 10% 25V | (EXCEPT SE500R/SE600/SE700R/SX600) |
| C855 | 1-164-489-11 | CERAMIC CHIP 0.22uF 10% 16V | (EXCEPT SE500R/SE600/SE700R/SX600) |
| C856 | 1-163-038-91 | CERAMIC CHIP 0.1uF 25V | (EXCEPT SE500R/SE600/SE700R/SX600) |
| C970 | 1-163-259-91 | CERAMIC CHIP 220PF 5% 50V | (SE600B/SE700B/SE800B/SX700B) |
| C971 | 1-124-257-00 | ELECT 2.2uF 20% 50V | (SE600B/SE700B/SE800B/SX700B) |
| C972 | 1-163-017-00 | CERAMIC CHIP 0.0047uF 5% 50V | (SE600B/SE700B/SE800B/SX700B) |
| C973 | 1-163-021-91 | CERAMIC CHIP 0.01uF 10% 50V | (SE600B/SE700B/SE800B/SX700B) |
| C974 | 1-109-982-11 | CERAMIC CHIP 1uF 10% 10V | (SE600B/SE700B/SE800B/SX700B) |
| C975 | 1-163-037-11 | CERAMIC CHIP 0.022uF 10% 25V | (SE600B/SE700B/SE800B/SX700B) |
| C976 | 1-163-259-91 | CERAMIC CHIP 220PF 5% 50V | (SE600B/SE700B/SE800B/SX700B) |
| C977 | 1-163-021-91 | CERAMIC CHIP 0.01uF 10% 50V | (SE600B/SE700B/SE800B/SX700B) |
| C978 | 1-163-017-00 | CERAMIC CHIP 0.0047uF 5% 50V | (SE600B/SE700B/SE800B/SX700B) |
| C979 | 1-163-255-11 | CERAMIC CHIP 150PF 5% 50V | (SE600B/SE700B/SE800B/SX700B) |
| C980 | 1-164-004-11 | CERAMIC CHIP 0.1uF 10% 25V | (SE600B/SE700B/SE800B/SX700B) |
| C981 | 1-163-021-91 | CERAMIC CHIP 0.01uF 10% 50V | (SE600B/SE700B/SE800B/SX700B) |
| C982 | 1-163-007-11 | CERAMIC CHIP 680PF 10% 50V | (SE600B/SE700B/SE800B/SX700B) |
| C983 | 1-163-009-11 | CERAMIC CHIP 0.001uF 10% 50V | (SE600B/SE700B/SE800B/SX700B) |
| C984 | 1-163-021-91 | CERAMIC CHIP 0.01uF 10% 50V | (SE600B/SE700B/SE800B/SX700B) |
| C985 | 1-163-251-11 | CERAMIC CHIP 100PF 5% 50V | (SE600B/SE700B/SE800B/SX700B) |
| C986 | 1-126-157-11 | ELECT 10uF 20% 16V | (SE600B/SE700B/SE800B/SX700B) |
| C987 | 1-107-823-11 | CERAMIC CHIP 0.47uF 10% 16V | (SE600B/SE700B/SE800B/SX700B) |
| C988 | 1-163-251-11 | CERAMIC CHIP 100PF 5% 50V | (SE600B/SE700B/SE800B/SX700B) |
| C991 | 1-164-004-11 | CERAMIC CHIP 0.1uF 10% 25V | (SE600B/SE700B/SE800B/SX700B) |
| C992 | 1-163-021-91 | CERAMIC CHIP 0.01uF 10% 50V | (SE600B/SE700B/SE800B/SX700B) |
| C993 | 1-163-021-91 | CERAMIC CHIP 0.01uF 10% 50V | (SE600B/SE700B/SE800B/SX700B) |
| C994 | 1-163-021-91 | CERAMIC CHIP 0.01uF 10% 50V | (SE600B/SE700B/SE800B/SX700B) |
| C995 | 1-124-584-00 | ELECT 100uF 20% 10V | (SE600B/SE700B/SE800B/SX700B) |
| C996 | 1-163-227-11 | CERAMIC CHIP 10PF 0.50PF 50V | (SE600B/SE700B/SE800B/SX700B) |
| | | < CONNECTOR > | |
| CN101 | 1-695-328-11 | HOUSING, CONNECTOR 5P | |
| CN102 | 1-779-723-11 | CONNECTOR, BOARD TO BOARD 9P | |
| * CN104 | 1-766-716-11 | CONNECTOR, BOARD TO BOARD 3P | |
| * CN161 | 1-506-469-11 | PIN, CONNECTOR 4P | |
| CN260 | 1-784-490-11 | CONNECTOR, FFC/FPC 11P | (EXCEPT SE350/SE500) |
| CN261 | 1-793-919-11 | CONNECTOR, FFC/FPC 6P (SE350/SE500) | |
| * CN262 | 1-560-893-00 | PIN, CONNECTOR 5P | |
| * CN263 | 1-560-890-00 | PIN, CONNECTOR 2P (EXCEPT SE350/SE500) | |
| CN350 | 1-784-486-11 | CONNECTOR, FFC/FPC 7P | |
| CN351 | 1-506-468-11 | PIN, CONNECTOR 3P | |
| CN460 | 1-691-043-21 | HOUSING, CONNECTOR 11P | (SE500/SE800/SX800) |
| CN461 | 1-695-328-11 | HOUSING, CONNECTOR 5P | (SE350/SE600/SE650/SE700/SX600/SX700) |
| CN500 | 1-793-918-11 | CONNECTOR, SQUARE TYPE 21P | (LINE-1 (TV))<br>(SE350/SE500R/SE600: A, N/SE700R) |
| CN501 | 1-506-469-11 | PIN, CONNECTOR 4P (SE500) | |
| * CN501 | 1-568-954-11 | PIN, CONNECTOR 5P (SE800/SX800) | |
| CN570 | 1-793-917-11 | CONNECTOR, SQUARE TYPE 21P | (DECODER/LINE-2 IN, LINE-1 (TV))<br>(EXCEPT SE350/SE500/SE600: A, N/ SE700R/SE800/SX800) |
| CN570 | 1-793-917-11 | CONNECTOR, SQUARE TYPE 21P | (DECODER/LINE-3 IN, LINE-1 (TV))<br>(SE500K/SE800/SX800) |
| CN600 | 1-778-674-21 | CONNECTOR, BOARD TO BOARD 19P | |
| CN601 | 1-793-673-11 | CONNECTOR, BOARD TO BOARD 7P | |
| | | < DIODE > | |
| D100 | 8-719-048-26 | DIODE GL528V1 (T/S LED) | |
| D110 | 8-719-200-82 | DIODE MPG06D-6052PKG3 | |
| D140 | 8-719-988-61 | DIODE 1SS355TE-17 | |
| D420 | 8-719-045-62 | DIODE SLR-342VCT31 (SYNCHRO REC) | (SE500K/SE800/SX800) |
| D421 | 8-719-988-61 | DIODE 1SS355TE-17 (SE500K/SE800/SX800) | |
| D422 | 8-719-056-06 | DIODE SLR-342DCT31 (RR) | (SE500/SE650/SE700/SE800/SX700/SX800) |
| D423 | 8-719-988-61 | DIODE 1SS355TE-17 | (SE500/SE650/SE700/SE800/SX700/SX800) |
| D424 | 8-719-067-40 | DIODE STZ6.8N-T146 | |
| D500 | 8-719-071-50 | DIODE BZA408B-115 | |
| D501 | 8-719-071-50 | DIODE BZA408B-115 | |
| D502 | 8-719-070-59 | DIODE PDZ6.8B-115 | |
| D503 | 8-719-977-40 | DIODE UDZ-TE-17-13B | |
| D504 | 8-719-070-59 | DIODE PDZ6.8B-115 | |
| D570 | 8-719-071-50 | DIODE BZA408B-115 | (EXCEPT SE350/SE500R/SE600: A, N/SE700R) |
| D571 | 8-719-070-59 | DIODE PDZ6.8B-115 | (EXCEPT SE350/SE500R/SE600: A, N/SE700R) |
| D572 | 8-719-977-40 | DIODE UDZ-TE-17-13B | (EXCEPT SE350/SE500R/SE600: A, N/SE700R) |

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| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| D573 | 8-719-070-59 | DIODE PDZ6.8B-115<br>(SE500R/SE650/SE700/SE800/SX700/SX800) | |
| D590 | 8-719-988-61 | DIODE 1SS355TE-17 | |
| D591 | 8-719-988-61 | DIODE 1SS355TE-17 (SE350/SE500) | |
| D603 | 8-719-075-84 | DIODE S1G-G2P<br>(EXCEPT SE350/SE500R/SE600: A, N/SE700R) | |
| D606 | 8-719-075-84 | DIODE S1G-G2P | |
| D607 | 8-719-075-84 | DIODE S1G-G2P | |
| D700 | 8-719-988-61 | DIODE 1SS355TE-17 (SE700R) | |
| D702 | 8-719-982-26 | DIODE MTZJ-T-77-33 | |
| D750 | 8-719-075-84 | DIODE S1G-G2P | |
| D800 | 8-719-988-61 | DIODE 1SS355TE-17<br>(EXCEPT SE600/SE700R/SX600) | |
| | | < IC > | |
| IC001 | 8-759-566-07 | IC LA7277M-TLM<br>(SE500/SE650/SE700/SE800/SX700/SX800) | |
| IC130 | 8-759-645-07 | IC LB1943N | |
| IC160 | 8-759-248-87 | IC MM1256XF-BE | |
| IC161 | 8-759-575-72 | IC M24C08-WMN6T | |
| IC162 | 8-759-673-31 | IC M37760MFH216GP<br>(SE500R/SE600/SE700R/SX600) | |
| IC162 | 8-759-673-32 | IC M37760MFH217GP<br>(EXCEPT SE500R/SE600/SE700R/SX600) | |
| IC200 | 8-759-638-71 | IC LA71562M-MPB | |
| IC260 | 8-759-549-79 | IC LA70001 (SE350) | |
| IC260 | 8-759-564-36 | IC LA70011 (EXCEPT SE350) | |
| IC301 | 8-759-638-55 | IC TDA9605H/N2, 518<br>(EXCEPT SE350/SE500) | |
| IC350 | 8-759-499-30 | IC BA7755AF-E2 | |
| IC420 | 8-759-547-59 | IC M35500BGP | |
| IC460 | 8-749-015-48 | IC RPM6940 | |
| IC580 | 8-759-009-07 | IC MC14053BFEL (SE500K) | |
| ⚠IC601 | 8-759-438-18 | IC PQ12RD08 | |
| IC850 | 8-759-484-61 | IC SDA5650X-GEG<br>(EXCEPT SE500R/SE600/SE700R/SX600) | |
| IC970 | 8-759-438-17 | IC LA7337<br>(SE600B/SE700B/SE800B/SX700B) | |
| | | < JACK > | |
| * J500 | 1-779-924-11 | JACK, PIN 2P (LINE-2 OUT) (SE500R) | |
| J500 | 1-784-412-11 | JACK, PIN 3P (LINE-2 OUT) (SE700R/SE800K) | |
| J500 | 1-784-414-11 | JACK, PIN 2P (LINE-2 OUT)<br>(EXCEPT SE350/SE500/SE600/<br>SE700R/SE800K/SX600) | |
| | | < SHORT > | |
| JR001 | 1-216-295-91 | SHORT 0 | |
| JR002 | 1-216-295-91 | SHORT 0 | |
| JR003 | 1-216-295-91 | SHORT 0 | |
| JR004 | 1-216-295-91 | SHORT 0 (SE500K) | |
| JR005 | 1-216-295-91 | SHORT 0 | |
| JR006 | 1-216-295-91 | SHORT 0 | |
| JR007 | 1-216-295-91 | SHORT 0 | |
| JR008 | 1-216-295-91 | SHORT 0 | |
| JR009 | 1-216-295-91 | SHORT 0 | |
| JR010 | 1-216-295-91 | SHORT 0 | |
| JR011 | 1-216-295-91 | SHORT 0 | |
| JR012 | 1-216-295-91 | SHORT 0 | |
| JR013 | 1-216-295-91 | SHORT 0 | |
| JR014 | 1-216-295-91 | SHORT 0 | |
| JR016 | 1-216-295-91 | SHORT 0 | |
| JR017 | 1-216-295-91 | SHORT 0 | |
| JR018 | 1-216-295-91 | SHORT 0 | |
| JR019 | 1-216-295-91 | SHORT 0 | |
| JR020 | 1-216-295-91 | SHORT 0 | |
| JR021 | 1-216-295-91 | SHORT 0 | |
| JR022 | 1-216-295-91 | SHORT 0 | |
| JR023 | 1-216-295-91 | SHORT 0 | |
| JR026 | 1-216-295-91 | SHORT 0 | |
| JR027 | 1-216-295-91 | SHORT 0 | |
| JR028 | 1-216-295-91 | SHORT 0 | |
| JR201 | 1-216-296-91 | SHORT 0 | |
| JR202 | 1-216-296-91 | SHORT 0 | |
| JR203 | 1-216-296-91 | SHORT 0 | |
| JR204 | 1-216-296-91 | SHORT 0 | |
| JR205 | 1-216-296-91 | SHORT 0 | |
| JR206 | 1-216-296-91 | SHORT 0 (SE600B/SE700B/SE800B/SX700B) | |
| JR207 | 1-216-296-91 | SHORT 0 | |
| JR208 | 1-216-296-91 | SHORT 0 | |
| JR209 | 1-216-296-91 | SHORT 0 | |
| JR210 | 1-216-296-91 | SHORT 0 | |
| JR211 | 1-216-296-91 | SHORT 0 | |
| JR212 | 1-216-296-91 | SHORT 0 | |
| JR213 | 1-216-296-91 | SHORT 0 | |
| JR214 | 1-216-296-91 | SHORT 0 | |
| JR215 | 1-216-296-91 | SHORT 0 | |
| JR216 | 1-216-296-91 | SHORT 0 (SE600B/SE700B/SE800B/SX700B) | |
| JR217 | 1-216-296-91 | SHORT 0 | |
| JR218 | 1-216-296-91 | SHORT 0 | |
| JR219 | 1-216-296-91 | SHORT 0 | |
| JR220 | 1-216-296-91 | SHORT 0 | |
| JR221 | 1-216-296-91 | SHORT 0 | |
| JR222 | 1-216-296-91 | SHORT 0 | |
| JR223 | 1-216-296-91 | SHORT 0 (SE600B/SE700B/SE800B/SX700B) | |
| JR224 | 1-216-296-91 | SHORT 0 | |
| JR225 | 1-216-296-91 | SHORT 0 | |
| JR226 | 1-216-296-91 | SHORT 0 | |
| JR227 | 1-216-295-91 | SHORT 0 | |
| JR228 | 1-216-296-91 | SHORT 0 | |
| JR229 | 1-216-296-91 | SHORT 0 | |
| JR230 | 1-216-296-91 | SHORT 0 (SE500/SE700R/SE800/SX800) | |
| JR231 | 1-216-296-91 | SHORT 0 | |
| JR232 | 1-216-296-91 | SHORT 0 | |
| JR233 | 1-216-296-91 | SHORT 0 | |
| JR234 | 1-216-296-91 | SHORT 0 | |
| JR235 | 1-216-296-91 | SHORT 0 | |
| JR236 | 1-216-296-91 | SHORT 0 | |
| JR237 | 1-216-296-91 | SHORT 0 | |
| JR238 | 1-216-296-91 | SHORT 0 | |
| JR239 | 1-216-296-91 | SHORT 0 (SE600B/SE700B/SE800B/SX700B) | |
| JR240 | 1-216-296-91 | SHORT 0 | |
| JR241 | 1-216-296-91 | SHORT 0 (SE500K) | |
| JR242 | 1-216-296-91 | SHORT 0 (SE500K) | |
| JR243 | 1-216-296-91 | SHORT 0 | |
| JR244 | 1-216-296-91 | SHORT 0 | |
| JR245 | 1-216-296-91 | SHORT 0 | |

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| JR246 | 1-216-296-91 | SHORT 0 | |
| JR247 | 1-216-296-91 | SHORT 0 | |
| JR248 | 1-216-296-91 | SHORT 0 (SE500/SE800/SX800) | |
| JR249 | 1-216-296-91 | SHORT 0 | |
| JR250 | 1-216-296-91 | SHORT 0 | |
| JR251 | 1-216-296-91 | SHORT 0 | |
| JR252 | 1-216-296-91 | SHORT 0 | |
| JS204 | 1-216-295-91 | SHORT 0 (SE350/SE600/SX600) | |
| JS302 | 1-216-295-91 | SHORT 0 (SE350/SE500) | |
| JS308 | 1-216-295-91 | SHORT 0 (SE350/SE500) | |
| JS351 | 1-216-295-91 | SHORT 0 (SE500/SE800/SX800) | |
| JS500 | 1-216-295-91 | SHORT 0 (SE350/SE500) | |
| JS501 | 1-216-295-91 | SHORT 0 (SE350/SE500) | |
| JS504 | 1-216-295-91 | SHORT 0 (SE500) | |
| JS570 | 1-216-295-91 | SHORT 0 (SE500K) | |
| JS571 | 1-216-295-91 | SHORT 0 (SE500K) | |
| JS580 | 1-216-295-91 | SHORT 0 (EXCEPT SE500K) | |
| JS581 | 1-216-295-91 | SHORT 0 (EXCEPT SE500K) | |
| JS590 | 1-216-295-91 | SHORT 0 (SE350/SE500) | |
| JS591 | 1-216-295-91 | SHORT 0 (EXCEPT SE350/SE500) | |
| JS700 | 1-216-295-91 | SHORT 0 (SE700R) | |
| JS701 | 1-216-296-91 | SHORT 0 (SE700R) | |
| | | < COIL > | |
| L001 | 1-414-934-21 | INDUCTOR 10uH | (SE500/SE650/SE700/SE800/SX700/SX800) |
| L140 | 1-414-936-21 | INDUCTOR 22uH | |
| L160 | 1-414-936-21 | INDUCTOR 22uH | |
| L161 | 1-414-936-21 | INDUCTOR 22uH | |
| L200 | 1-414-946-21 | INDUCTOR 39uH | |
| L201 | 1-414-940-21 | INDUCTOR 100uH | |
| L202 | 1-414-934-21 | INDUCTOR 10uH | |
| L203 | 1-414-934-21 | INDUCTOR 10uH | |
| L204 | 1-414-934-21 | INDUCTOR 10uH | |
| L205 | 1-414-934-21 | INDUCTOR 10uH | |
| L206 | 1-414-938-21 | INDUCTOR 47uH | (SE600B/SE700B/SE800B/SX700B) |
| L270 | 1-414-940-21 | INDUCTOR 100uH | |
| L271 | 1-414-930-21 | INDUCTOR 2.2uH | |
| L301 | 1-414-940-21 | INDUCTOR 100uH | (EXCEPT SE350/SE500) |
| L350 | 1-414-940-21 | INDUCTOR 100uH | |
| L380 | 1-414-940-21 | INDUCTOR 100uH | |
| L390 | 1-410-687-11 | INDUCTOR 1.2mH | (SE500/SE800/SX800) |
| L460 | 1-414-938-21 | INDUCTOR 47uH | |
| L510 | 1-414-940-21 | INDUCTOR 100uH | |
| L580 | 1-414-940-21 | INDUCTOR 100uH (SE500K) | |
| L660 | 1-414-930-21 | INDUCTOR 2.2uH | |
| L661 | 1-414-936-21 | INDUCTOR 22uH | (SE350/SE500/SE600: B, N/SE700: B, K, N, R/SE800: B, K, N/SX700B) |
| L662 | 1-414-936-21 | INDUCTOR 22uH | |
| L663 | 1-414-936-21 | INDUCTOR 22uH | |
| L701 | 1-414-930-21 | INDUCTOR 2.2uH | |
| L750 | 1-414-930-21 | INDUCTOR 2.2uH | |
| L751 | 1-414-934-21 | INDUCTOR 10uH | |
| L970 | 1-414-933-21 | INDUCTOR 6.8uH | (SE600B/SE700B/SE800B/SX700B) |
| L971 | 1-414-945-21 | INDUCTOR 27uH | (SE600B/SE700B/SE800B/SX700B) |
| L972 | 1-414-938-21 | INDUCTOR 47uH | (SE600B/SE700B/SE800B/SX700B) |
| L973 | 1-414-938-21 | INDUCTOR 47uH | (SE600B/SE700B/SE800B/SX700B) |
| L975 | 1-414-934-21 | INDUCTOR 10uH | (SE600B/SE700B/SE800B/SX700B) |
| | | < FLUORESCENT INDICATOR TUBE > | |
| ND420 | 1-517-832-11 | INDICATOR TUBE, FLUORESCENT | |
| | | < PHOTO INTERRUPTER > | |
| PH100 | 8-749-015-86 | PHOTO INTERRUPTER GP3S120S | |
| PH101 | 8-749-015-86 | PHOTO INTERRUPTER GP3S120S | |
| | | < IC LINK > | |
| ⚠PS120 | 1-532-605-00 | LINK, IC (0.4A) | |
| ⚠PS390 | 1-532-727-11 | LINK, IC (0.25A) (SE500/SE800/SX800) | |
| ⚠PS602 | 1-532-727-11 | LINK, IC (0.25A) | (EXCEPT SE350/SE500R/SE600: A, N/SE700R) |
| ⚠PS603 | 1-532-727-11 | LINK, IC (0.25A) | |
| | | < TRANSISTOR > | |
| Q100 | 8-729-043-84 | TRANSISTOR PT380F3 | |
| Q101 | 8-729-043-84 | TRANSISTOR PT380F3 | |
| Q102 | 8-729-281-53 | TRANSISTOR 2SC1815GR-TPE2 | |
| Q103 | 8-729-043-29 | TRANSISTOR PDTC144EK-115 | |
| Q104 | 8-729-216-22 | TRANSISTOR 2PB709AR-115 | |
| Q140 | 8-729-422-33 | TRANSISTOR 2PD601AR-115 | (SE500/SE800/SX800) |
| Q200 | 8-729-422-33 | TRANSISTOR 2PD601AR-115 | |
| Q201 | 8-729-422-33 | TRANSISTOR 2PD601AR-115 | |
| Q202 | 8-729-422-33 | TRANSISTOR 2PD601AR-115 | |
| Q203 | 8-729-216-22 | TRANSISTOR 2PB709AR-115 | |
| Q204 | 8-729-043-29 | TRANSISTOR PDTC144EK-115 | (SE600B/SE700B/SE800B/SX700B) |
| Q270 | 8-729-043-29 | TRANSISTOR PDTC144EK-115 | (EXCEPT SE350/SE500) |
| Q350 | 8-729-281-53 | TRANSISTOR 2SC1815GR-TPE2 | |
| Q380 | 8-729-802-91 | TRANSISTOR 2SD879-AA | |
| Q390 | 8-729-900-51 | TRANSISTOR UN2115-QRS (TX) | (SE500/SE800/SX800) |
| Q391 | 8-729-043-29 | TRANSISTOR PDTC144EK-115 | (SE500/SE800/SX800) |
| Q392 | 8-729-012-31 | TRANSISTOR 2SC4040-TL2-Q | (SE500/SE800/SX800) |
| Q501 | 8-729-043-32 | TRANSISTOR PDTA114EK-115 | |
| Q502 | 8-729-043-29 | TRANSISTOR PDTC144EK-115 | |
| Q510 | 8-729-216-22 | TRANSISTOR 2PB709AR-115 | |
| Q520 | 8-729-216-22 | TRANSISTOR 2PB709AR-115 | (SE500R/SE700R/SE800K) |
| Q540 | 8-729-216-22 | TRANSISTOR 2PB709AR-115 | (EXCEPT SE350/SE500R/SE600: A, N/SE700: G, I, R/SE800G) |
| Q541 | 8-729-216-22 | TRANSISTOR 2PB709AR-115 | (EXCEPT SE350/SE500R/SE600: A, N/SE700: G, I, R/SE800G) |

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

# MA-373

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| Q580 | 8-729-043-29 | TRANSISTOR PDTC144EK-115 | (SE500K) |
| Q581 | 8-729-043-29 | TRANSISTOR PDTC144EK-115 | (SE500K) |
| Q582 | 8-729-043-29 | TRANSISTOR PDTC144EK-115 | (SE500K) |
| Q583 | 8-729-422-33 | TRANSISTOR 2PD601AR-115 | (SE500K) |
| Q590 | 8-729-422-33 | TRANSISTOR 2PD601AR-115 | (EXCEPT SE350/SE500) |
| Q591 | 8-729-422-33 | TRANSISTOR 2PD601AR-115 | |
| Q592 | 8-729-216-22 | TRANSISTOR 2PB709AR-115 | (EXCEPT SE350/SE500) |
| Q607 | 8-729-804-41 | TRANSISTOR 2SB1122-ST-TD | (EXCEPT SE350/SE500R/SE600: A, N/SE700R) |
| Q608 | 8-729-043-29 | TRANSISTOR PDTC144EK-115 | (EXCEPT SE350/SE500R/SE600: A, N/SE700R) |
| Q612 | 8-729-804-41 | TRANSISTOR 2SB1122-ST-TD | |
| Q613 | 8-729-043-29 | TRANSISTOR PDTC144EK-115 | |
| Q660 | 8-729-216-22 | TRANSISTOR 2PB709AR-115 | |
| Q661 | 8-729-216-22 | TRANSISTOR 2PB709AR-115 | |
| Q700 | 8-729-422-33 | TRANSISTOR 2PD601AR-115 | (SE700R) |
| Q701 | 8-729-216-22 | TRANSISTOR 2PB709AR-115 | (SE700R) |
| Q702 | 8-729-216-22 | TRANSISTOR 2PB709AR-115 | (SE700R) |
| Q720 | 8-729-119-76 | TRANSISTOR 2SA1309A-QRSTA | |
| Q721 | 8-729-422-33 | TRANSISTOR 2PD601AR-115 | |
| Q730 | 8-729-422-33 | TRANSISTOR 2PD601AR-115 | (SE700R) |
| Q731 | 8-729-422-33 | TRANSISTOR 2PD601AR-115 | (SE700R) |
| Q751 | 8-729-043-29 | TRANSISTOR PDTC144EK-115 | |
| Q752 | 8-729-216-22 | TRANSISTOR 2PB709AR-115 | |
| Q800 | 8-729-216-22 | TRANSISTOR 2PB709AR-115 | (EXCEPT SE600/SE700R/SX600) |
| Q801 | 8-729-422-33 | TRANSISTOR 2PD601AR-115 | (EXCEPT SE600/SE700R/SX600) |
| Q802 | 8-729-422-33 | TRANSISTOR 2PD601AR-115 | (EXCEPT SE600/SE700R/SX600) |
| Q803 | 8-729-422-33 | TRANSISTOR 2PD601AR-115 | (EXCEPT SE600/SE700R/SX600) |
| Q804 | 8-729-043-29 | TRANSISTOR PDTC144EK-115 | (EXCEPT SE600/SE700R/SX600) |
| Q850 | 8-729-216-22 | TRANSISTOR 2PB709AR-115 | (EXCEPT SE500R/SE600/SE700R/SX600) |
| Q970 | 8-729-216-22 | TRANSISTOR 2PB709AR-115 | (SE600B/SE700B/SE800B/SX700B) |
| Q972 | 8-729-043-32 | TRANSISTOR PDTA114EK-115 | (SE600B/SE700B/SE800B/SX700B) |
| Q973 | 8-729-422-33 | TRANSISTOR 2PD601AR-115 | (SE600B/SE700B/SE800B/SX700B) |
| Q974 | 8-729-422-33 | TRANSISTOR 2PD601AR-115 | (SE600B/SE700B/SE800B/SX700B) |
| Q975 | 8-729-043-32 | TRANSISTOR PDTA114EK-115 | (SE600B/SE700B/SE800B/SX700B) |
| Q976 | 8-729-043-29 | TRANSISTOR PDTC144EK-115 | (SE600B/SE700B/SE800B/SX700B) |
| | | < RESISTOR > | |
| R001 | 1-208-806-11 | METAL CHIP 10K 0.5% 1/10W | (SE500/SE650/SE700/SE800/SX700/SX800) |
| R002 | 1-216-041-00 | METAL CHIP 470 5% 1/10W | (SE500/SE650/SE700/SE800/SX700/SX800) |
| R003 | 1-216-041-00 | METAL CHIP 470 5% 1/10W | (SE500/SE650/SE700/SE800/SX700/SX800) |
| R004 | 1-216-071-00 | METAL CHIP 8.2K 5% 1/10W | (SE500/SE650/SE700/SE800/SX700/SX800) |
| R005 | 1-216-049-91 | RES, CHIP 1K 5% 1/10W | (SE500/SE650/SE700/SE800/SX700/SX800) |
| R006 | 1-216-051-00 | METAL CHIP 1.2K 5% 1/10W | (SE500/SE650/SE700/SE800/SX700/SX800) |
| R100 | 1-216-077-91 | RES, CHIP 15K 5% 1/10W | |
| R101 | 1-249-413-11 | CARBON 470 5% 1/4W | |
| R102 | 1-216-077-91 | RES, CHIP 15K 5% 1/10W | |
| R103 | 1-216-081-00 | METAL CHIP 22K 5% 1/10W | |
| R104 | 1-216-049-91 | RES, CHIP 1K 5% 1/10W | |
| R105 | 1-216-057-00 | METAL CHIP 2.2K 5% 1/10W | |
| R106 | 1-249-400-11 | CARBON 39 5% 1/4W | |
| R107 | 1-249-400-11 | CARBON 39 5% 1/4W | |
| R108 | 1-216-081-00 | METAL CHIP 22K 5% 1/10W | |
| R110 | 1-216-057-00 | METAL CHIP 2.2K 5% 1/10W | |
| R111 | 1-216-089-91 | RES, CHIP 47K 5% 1/10W | |
| R114 | 1-216-089-91 | RES, CHIP 47K 5% 1/10W | |
| R115 | 1-216-089-91 | RES, CHIP 47K 5% 1/10W | |
| R120 | 1-216-089-91 | RES, CHIP 47K 5% 1/10W | |
| R121 | 1-216-089-91 | RES, CHIP 47K 5% 1/10W | |
| R123 | 1-216-065-91 | RES, CHIP 4.7K 5% 1/10W | |
| R124 | 1-216-041-00 | METAL CHIP 470 5% 1/10W | |
| R130 | 1-216-077-91 | RES, CHIP 15K 5% 1/10W | |
| R132 | 1-216-041-00 | METAL CHIP 470 5% 1/10W | |
| R133 | 1-216-089-91 | RES, CHIP 47K 5% 1/10W | |
| R140 | 1-216-073-00 | METAL CHIP 10K 5% 1/10W | (SE500/SE800/SX800) |
| R141 | 1-216-073-00 | METAL CHIP 10K 5% 1/10W | (SE500/SE800/SX800) |
| R142 | 1-216-051-00 | METAL CHIP 1.2K 5% 1/10W | |
| R143 | 1-216-065-91 | RES, CHIP 4.7K 5% 1/10W | |
| R160 | 1-216-053-00 | METAL CHIP 1.5K 5% 1/10W | (SE700: G, I/SE800G) |
| R160 | 1-216-061-00 | METAL CHIP 3.3K 5% 1/10W | (SE600B/SE700B/SE800B/SX700B) |
| R160 | 1-216-067-00 | METAL CHIP 5.6K 5% 1/10W | (SE350/SE500K/SE600N/ SE700: K, N/SE800: K, N) |
| R160 | 1-216-071-00 | METAL CHIP 8.2K 5% 1/10W | (SE500R/SE700R) |
| R160 | 1-216-295-91 | SHORT 0 | (SE600: A, E/SE650/SE700: D1, D2, E1, E2 /SE800: D1, D2, E/SX600/SX700: D, E/SX800) |
| R161 | 1-216-053-00 | METAL CHIP 1.5K 5% 1/10W | (SE500K/SE600E/SE700: B, G, R/ SX600/SX700B) |
| R161 | 1-216-061-00 | METAL CHIP 3.3K 5% 1/10W | (SE600N/SE700: E1, E2, I/SE800B/SX700E) |
| R161 | 1-216-067-00 | METAL CHIP 5.6K 5% 1/10W | (SE700N/SE800: E, G) |
| R161 | 1-216-071-00 | METAL CHIP 8.2K 5% 1/10W | (SE650/SE700: D1, D2, K/SX700D) |
| R161 | 1-216-075-00 | METAL CHIP 12K 5% 1/10W | (SE800: D1, D2, N/SX800) |
| R161 | 1-216-079-00 | METAL CHIP 18K 5% 1/10W | (SE800K) |
| R161 | 1-216-295-91 | SHORT 0 | (SE350/SE500R/SE600: A, B) |
| R162 | 1-216-073-00 | METAL CHIP 10K 5% 1/10W | |
| R163 | 1-216-073-00 | METAL CHIP 10K 5% 1/10W | |
| R164 | 1-216-073-00 | METAL CHIP 10K 5% 1/10W | |
| R165 | 1-216-061-00 | METAL CHIP 3.3K 5% 1/10W | (SE800/SX800) |
| R166 | 1-216-061-00 | METAL CHIP 3.3K 5% 1/10W | (SE800/SX800) |
| R167 | 1-216-069-00 | METAL CHIP 6.8K 5% 1/10W | |
| R168 | 1-216-101-00 | METAL CHIP 150K 5% 1/10W | |

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| R169 | 1-216-113-00 | METAL CHIP | 470K | 5% | 1/10W |
| R170 | 1-216-061-00 | METAL CHIP | 3.3K | 5% | 1/10W |
| R171 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| R172 | 1-216-295-91 | SHORT | 0 | | (EXCEPT SE350/SE500/SE700R) |
| R175 | 1-216-295-91 | SHORT | 0 | | (EXCEPT SE350/SE500/SE700R) |
| R176 | 1-216-037-00 | METAL CHIP | 330 | 5% | 1/10W |
| R177 | 1-216-041-00 | METAL CHIP | 470 | 5% | 1/10W |
| R178 | 1-216-041-00 | METAL CHIP | 470 | 5% | 1/10W |
| R179 | 1-216-041-00 | METAL CHIP | 470 | 5% | 1/10W |
| R180 | 1-216-069-00 | METAL CHIP | 6.8K | 5% | 1/10W |
| R181 | 1-216-061-00 | METAL CHIP | 3.3K | 5% | 1/10W |
| R182 | 1-216-033-00 | METAL CHIP | 220 | 5% | 1/10W |
| R183 | 1-216-033-00 | METAL CHIP | 220 | 5% | 1/10W |
| R184 | 1-216-295-91 | SHORT | 0 | | |
| R185 | 1-216-295-91 | SHORT | 0 | | |
| R186 | 1-216-295-91 | SHORT | 0 | | |
| R187 | 1-216-295-91 | SHORT | 0 | | |
| R188 | 1-216-295-91 | SHORT | 0 | | |
| R189 | 1-216-049-91 | RES, CHIP | 1K | 5% | 1/10W |
| R190 | 1-216-061-00 | METAL CHIP | 3.3K | 5% | 1/10W<br>(EXCEPT SE350/SE500/SE700R) |
| R191 | 1-216-061-00 | METAL CHIP | 3.3K | 5% | 1/10W |
| R192 | 1-216-295-91 | SHORT | 0 | | (EXCEPT SE350/SE500) |
| R193 | 1-216-097-91 | RES, CHIP | 100K | 5% | 1/10W<br>(EXCEPT SE350/SE500) |
| R194 | 1-216-049-91 | RES, CHIP | 1K | 5% | 1/10W<br>(EXCEPT SE350/SE500) |
| R196 | 1-216-061-00 | METAL CHIP | 3.3K | 5% | 1/10W |
| R200 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| R203 | 1-216-055-00 | METAL CHIP | 1.8K | 5% | 1/10W |
| R204 | 1-216-037-00 | METAL CHIP | 330 | 5% | 1/10W |
| R205 | 1-216-037-00 | METAL CHIP | 330 | 5% | 1/10W |
| R206 | 1-216-045-00 | METAL CHIP | 680 | 5% | 1/10W<br>(EXCEPT SE350) |
| R206 | 1-216-047-91 | RES, CHIP | 820 | 5% | 1/10W<br>(SE350) |
| R207 | 1-216-047-91 | RES, CHIP | 820 | 5% | 1/10W<br>(SE350) |
| R207 | 1-216-059-00 | METAL CHIP | 2.7K | 5% | 1/10W<br>(SE600/SX600) |
| R207 | 1-216-061-00 | METAL CHIP | 3.3K | 5% | 1/10W<br>(SE500) |
| R207 | 1-216-063-91 | RES, CHIP | 3.9K | 5% | 1/10W<br>(SE650/SE700/SE800/SX700/SX800) |
| R208 | 1-216-065-91 | RES, CHIP | 4.7K | 5% | 1/10W |
| R209 | 1-216-055-00 | METAL CHIP | 1.8K | 5% | 1/10W |
| R210 | 1-216-043-91 | RES, CHIP | 560 | 5% | 1/10W |
| R211 | 1-216-071-00 | METAL CHIP | 8.2K | 5% | 1/10W |
| R212 | 1-216-051-00 | METAL CHIP | 1.2K | 5% | 1/10W |
| R213 | 1-216-041-00 | METAL CHIP | 470 | 5% | 1/10W |
| R214 | 1-216-041-00 | METAL CHIP | 470 | 5% | 1/10W |
| R215 | 1-216-025-91 | RES, CHIP | 100 | 5% | 1/10W |
| R216 | 1-216-105-91 | RES, CHIP | 220K | 5% | 1/10W<br>(EXCEPT SE350/SE500) |
| R216 | 1-216-109-00 | METAL CHIP | 330K | 5% | 1/10W<br>(SE500) |
| R216 | 1-216-117-00 | METAL CHIP | 680K | 5% | 1/10W<br>(SE350) |
| R217 | 1-216-025-91 | RES, CHIP | 100 | 5% | 1/10W<br>(EXCEPT SE350/SE500R/SE600: A, N/SE700: G, I, R/SE800G) |
| R218 | 1-216-295-91 | SHORT | 0 | | |
| R219 | 1-216-017-91 | RES, CHIP | 47 | 5% | 1/10W<br>(SE350/SE600/SX600) |
| R219 | 1-216-025-91 | RES, CHIP | 100 | 5% | 1/10W<br>(EXCEPT SE350/SE600/SX600) |
| R220 | 1-216-049-91 | RES, CHIP | 1K | 5% | 1/10W |
| R221 | 1-216-017-91 | RES, CHIP | 47 | 5% | 1/10W |
| R222 | 1-216-017-91 | RES, CHIP | 47 | 5% | 1/10W<br>(SE500/SE800/SX800) |
| R223 | 1-216-017-91 | RES, CHIP | 47 | 5% | 1/10W<br>(EXCEPT SE350/SE500R/SE600: A, N/SE700R) |
| R224 | 1-216-057-00 | METAL CHIP | 2.2K | 5% | 1/10W |
| R225 | 1-216-057-00 | METAL CHIP | 2.2K | 5% | 1/10W |
| R226 | 1-216-055-00 | METAL CHIP | 1.8K | 5% | 1/10W |
| R227 | 1-216-295-91 | SHORT | 0 | | |
| R228 | 1-216-295-91 | SHORT | 0 | | (SE600B/SE700B/SE800B/SX700B) |
| R232 | 1-216-077-91 | RES, CHIP | 15K | 5% | 1/10W<br>(EXCEPT SE500) |
| R232 | 1-216-085-00 | METAL CHIP | 33K | 5% | 1/10W<br>(SE500) |
| R233 | 1-216-065-91 | RES, CHIP | 4.7K | 5% | 1/10W<br>(SE600B/SE700B/SE800B/SX700B) |
| R235 | 1-216-089-91 | RES, CHIP | 47K | 5% | 1/10W |
| R236 | 1-216-089-91 | RES, CHIP | 47K | 5% | 1/10W |
| R270 | 1-216-041-00 | METAL CHIP | 470 | 5% | 1/10W<br>(EXCEPT SE350/SE500) |
| R270 | 1-216-043-91 | RES, CHIP | 560 | 5% | 1/10W<br>(SE500) |
| R271 | 1-216-041-00 | METAL CHIP | 470 | 5% | 1/10W<br>(EXCEPT SE350/SE500) |
| R271 | 1-216-043-91 | RES, CHIP | 560 | 5% | 1/10W<br>(SE350/SE500) |
| R272 | 1-216-055-00 | METAL CHIP | 1.8K | 5% | 1/10W<br>(SE350) |
| R272 | 1-216-057-00 | METAL CHIP | 2.2K | 5% | 1/10W<br>(EXCEPT SE350/SE500) |
| R272 | 1-216-059-00 | METAL CHIP | 2.7K | 5% | 1/10W<br>(SE500) |
| R273 | 1-216-295-91 | SHORT | 0 | | |
| R274 | 1-216-065-91 | RES, CHIP | 4.7K | 5% | 1/10W<br>(SE500) |
| R274 | 1-216-067-00 | METAL CHIP | 5.6K | 5% | 1/10W<br>(EXCEPT SE500) |
| R275 | 1-216-089-91 | RES, CHIP | 47K | 5% | 1/10W<br>(EXCEPT SE350/SE500) |
| R276 | 1-216-071-00 | METAL CHIP | 8.2K | 5% | 1/10W<br>(SE500) |
| R276 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W<br>(EXCEPT SE350/SE500) |
| R276 | 1-216-077-91 | RES, CHIP | 15K | 5% | 1/10W<br>(SE350) |
| R277 | 1-216-081-00 | METAL CHIP | 22K | 5% | 1/10W |
| R278 | 1-216-081-00 | METAL CHIP | 22K | 5% | 1/10W |
| R279 | 1-216-081-00 | METAL CHIP | 22K | 5% | 1/10W |
| R280 | 1-216-097-91 | RES, CHIP | 100K | 5% | 1/10W |
| R283 | 1-216-295-91 | SHORT | 0 | | |
| R284 | 1-216-295-91 | SHORT | 0 | | |
| R286 | 1-216-025-91 | RES, CHIP | 100 | 5% | 1/10W |
| R301 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W<br>(EXCEPT SE350/SE500) |

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| R302 | 1-216-079-00 | METAL CHIP | 18K | 5% | 1/10W<br>(EXCEPT SE350/SE500) |
| R304 | 1-216-049-91 | RES, CHIP | 1K | 5% | 1/10W<br>(EXCEPT SE350/SE500) |
| R305 | 1-216-049-91 | RES, CHIP | 1K | 5% | 1/10W<br>(EXCEPT SE350/SE500) |
| R306 | 1-216-083-00 | METAL CHIP | 27K | 5% | 1/10W<br>(EXCEPT SE350/SE500) |
| R307 | 1-216-057-00 | METAL CHIP | 2.2K | 5% | 1/10W<br>(EXCEPT SE350/SE500) |
| R308 | 1-208-820-11 | METAL CHIP | 39K | 0.5% | 1/10W<br>(EXCEPT SE350/SE500) |
| R309 | 1-216-079-00 | METAL CHIP | 18K | 5% | 1/10W<br>(EXCEPT SE350/SE500) |
| R310 | 1-216-079-00 | METAL CHIP | 18K | 5% | 1/10W<br>(EXCEPT SE350/SE500) |
| R311 | 1-216-057-00 | METAL CHIP | 2.2K | 5% | 1/10W<br>(EXCEPT SE350/SE500) |
| R312 | 1-216-083-00 | METAL CHIP | 27K | 5% | 1/10W<br>(EXCEPT SE350/SE500) |
| R313 | 1-216-133-00 | METAL CHIP | 3.3M | 5% | 1/10W<br>(EXCEPT SE350/SE500) |
| R315 | 1-216-033-00 | METAL CHIP | 220 | 5% | 1/10W<br>(EXCEPT SE350/SE500) |
| R316 | 1-216-033-00 | METAL CHIP | 220 | 5% | 1/10W<br>(EXCEPT SE350/SE500) |
| R322 | 1-216-295-91 | SHORT | 0 (EXCEPT SE350/SE500) | | |
| R323 | 1-216-065-91 | RES, CHIP | 4.7K | 5% | 1/10W<br>(SE800/SX800) |
| R324 | 1-216-065-91 | RES, CHIP | 4.7K | 5% | 1/10W<br>(SE800/SX800) |
| R325 | 1-216-079-00 | METAL CHIP | 18K | 5% | 1/10W<br>(EXCEPT SE350/SE500/SE600: A, N/SE700R) |
| R326 | 1-216-079-00 | METAL CHIP | 18K | 5% | 1/10W<br>(EXCEPT SE350/SE500/SE600: A, N/SE700R) |
| R329 | 1-216-041-00 | METAL CHIP | 470 | 5% | 1/10W<br>(EXCEPT SE350/SE500) |
| R350 | 1-216-093-91 | RES, CHIP | 68K | 5% | 1/10W |
| R351 | 1-216-067-00 | METAL CHIP | 5.6K | 5% | 1/10W |
| R352 | 1-216-093-91 | RES, CHIP | 68K | 5% | 1/10W<br>(SE500) |
| R353 | 1-216-067-00 | METAL CHIP | 5.6K | 5% | 1/10W<br>(SE500) |
| R354 | 1-216-129-00 | METAL CHIP | 2.2M | 5% | 1/10W |
| R355 | 1-216-093-91 | RES, CHIP | 68K | 5% | 1/10W<br>(SE350/SE500) |
| R356 | 1-216-067-00 | METAL CHIP | 5.6K | 5% | 1/10W<br>(SE350/SE500) |
| R357 | 1-216-071-00 | METAL CHIP | 8.2K | 5% | 1/10W |
| R358 | 1-216-055-00 | METAL CHIP | 1.8K | 5% | 1/10W |
| R359 | 1-216-065-91 | RES, CHIP | 4.7K | 5% | 1/10W |
| R362 | 1-216-051-00 | METAL CHIP | 1.2K | 5% | 1/10W |
| R363 | 1-216-079-00 | METAL CHIP | 18K | 5% | 1/10W |
| R364 | 1-216-035-00 | METAL CHIP | 270 | 5% | 1/10W |
| R365 | 1-216-109-00 | METAL CHIP | 330K | 5% | 1/10W |
| R366 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| R367 | 1-216-069-00 | METAL CHIP | 6.8K | 5% | 1/10W |
| R368 | 1-216-047-91 | RES, CHIP | 820 | 5% | 1/10W |
| R370 | 1-216-075-00 | METAL CHIP | 12K | 5% | 1/10W |
| R371 | 1-216-079-00 | METAL CHIP | 18K | 5% | 1/10W |
| R380 | 1-216-017-91 | RES, CHIP | 47 | 5% | 1/10W |
| R381 | 1-216-063-91 | RES, CHIP | 3.9K | 5% | 1/10W<br>(EXCEPT SE500/SE800/SX800) |
| R381 | 1-216-067-00 | METAL CHIP | 5.6K | 5% | 1/10W<br>(SE500/SE800/SX800) |
| R382 | 1-217-671-11 | METAL CHIP | 1 | 5% | 1/10W |
| R383 | 1-216-031-00 | METAL CHIP | 180 | 5% | 1/10W |
| R390 | 1-216-083-00 | METAL CHIP | 27K | 5% | 1/10W<br>(SE500/SE800/SX800) |
| R391 | 1-249-394-11 | CARBON | 12 | 5% | 1/4W<br>(SE500/SE800/SX800) |
| R392 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W<br>(SE500/SE800/SX800) |
| R420 | 1-216-295-91 | SHORT | 0 | | |
| R421 | 1-216-295-91 | SHORT | 0 | | |
| R422 | 1-216-049-91 | RES, CHIP | 1K | 5% | 1/10W |
| R423 | 1-216-295-91 | SHORT | 0 | | |
| R424 | 1-216-041-00 | METAL CHIP | 470 | 5% | 1/10W<br>(EXCEPT SE350/SE600/SX600) |
| R425 | 1-216-041-00 | METAL CHIP | 470 | 5% | 1/10W<br>(SE500K/SE800/SX800) |
| R427 | 1-216-017-91 | RES, CHIP | 47 | 5% | 1/10W |
| R460 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| R461 | 1-216-037-00 | METAL CHIP | 330 | 5% | 1/10W |
| R462 | 1-216-049-91 | RES, CHIP | 1K | 5% | 1/10W |
| R463 | 1-216-053-00 | METAL CHIP | 1.5K | 5% | 1/10W |
| R465 | 1-216-061-00 | METAL CHIP | 3.3K | 5% | 1/10W |
| R466 | 1-216-065-91 | RES, CHIP | 4.7K | 5% | 1/10W |
| R467 | 1-216-069-00 | METAL CHIP | 6.8K | 5% | 1/10W |
| R468 | 1-216-077-91 | RES, CHIP | 15K | 5% | 1/10W |
| R469 | 1-216-089-91 | RES, CHIP | 47K | 5% | 1/10W |
| R470 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| R471 | 1-216-037-00 | METAL CHIP | 330 | 5% | 1/10W |
| R477 | 1-216-069-00 | METAL CHIP | 6.8K | 5% | 1/10W |
| R478 | 1-216-077-91 | RES, CHIP | 15K | 5% | 1/10W |
| R479 | 1-216-089-91 | RES, CHIP | 47K | 5% | 1/10W<br>(SE500K/SE800/SX800) |
| R500 | 1-216-041-00 | METAL CHIP | 470 | 5% | 1/10W |
| R501 | 1-216-041-00 | METAL CHIP | 470 | 5% | 1/10W |
| R502 | 1-216-041-00 | METAL CHIP | 470 | 5% | 1/10W |
| R503 | 1-216-041-00 | METAL CHIP | 470 | 5% | 1/10W<br>(EXCEPT SE350/SE500) |
| R509 | 1-216-065-91 | RES, CHIP | 4.7K | 5% | 1/10W<br>(SE500R/SE650/SE700/SE800/SX700/SX800) |
| R510 | 1-249-407-11 | CARBON | 150 | 5% | 1/4W<br>(SE350/SE500/SE700R) |
| R510 | 1-249-408-11 | CARBON | 180 | 5% | 1/4W<br>(EXCEPT SE350/SE500/SE700R) |
| R511 | 1-249-407-11 | CARBON | 150 | 5% | 1/4W |
| R512 | 1-216-022-00 | METAL CHIP | 75 | 5% | 1/10W |
| R514 | 1-216-037-00 | METAL CHIP | 330 | 5% | 1/10W |
| R515 | 1-216-049-91 | RES, CHIP | 1K | 5% | 1/10W |
| R516 | 1-216-065-91 | RES, CHIP | 4.7K | 5% | 1/10W |
| R517 | 1-216-022-00 | METAL CHIP | 75 | 5% | 1/10W |
| R518 | 1-216-065-91 | RES, CHIP | 4.7K | 5% | 1/10W<br>(SE650/SE700/SE800/SX700/SX800) |
| R520 | 1-216-022-00 | METAL CHIP | 75 | 5% | 1/10W<br>(SE500R/SE700R/SE800K) |
| R521 | 1-249-408-11 | CARBON | 180 | 5% | 1/4W<br>(SE500R/SE700R/SE800K) |
| R522 | 1-216-025-91 | RES, CHIP | 100 | 5% | 1/10W<br>(SE500R/SE700R/SE800K) |
| R524 | 1-249-407-11 | CARBON | 150 | 5% | 1/4W<br>(SE500R/SE700R/SE800K) |

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| R541 | 1-216-025-91 | RES, CHIP | 100 | 5% | 1/10W (EXCEPT SE350/SE500R/SE600: A, N/SE700: G, I, R/SE800G) |
| R542 | 1-249-408-11 | CARBON | 180 | 5% | 1/4W (EXCEPT SE350/SE500R/SE600: A, N/SE700: G, I, R/SE800G) |
| R543 | 1-249-407-11 | CARBON | 150 | 5% | 1/4W (EXCEPT SE350/SE500R/SE600: A, N/SE700: G, I, R/SE800G) |
| R545 | 1-216-085-00 | METAL CHIP | 33K | 5% | 1/10W (EXCEPT SE350/SE500R/SE600: A, N/SE700: G, I, R) |
| R546 | 1-216-089-91 | RES, CHIP | 47K | 5% | 1/10W (EXCEPT SE350/SE500R/SE600: A, N/SE700: G, I, R) |
| R547 | 1-216-049-91 | RES, CHIP | 1K | 5% | 1/10W (EXCEPT SE350/SE500R/SE600: A, N/SE700: G, I, R/SE800G) |
| R548 | 1-216-022-00 | METAL CHIP | 75 | 5% | 1/10W (EXCEPT SE350/SE500R/SE600: A, N/SE700R) |
| R549 | 1-216-022-00 | METAL CHIP | 75 | 5% | 1/10W (EXCEPT SE350/SE500R/SE600: A, N/SE700: G, I, R/SE800G) |
| R570 | 1-216-041-00 | METAL CHIP | 470 | 5% | 1/10W (EXCEPT SE350/SE500R/SE600: A, N/SE700R) |
| R571 | 1-216-041-00 | METAL CHIP | 470 | 5% | 1/10W (EXCEPT SE350/SE500R/SE600: A, N/SE700R) |
| R572 | 1-216-041-00 | METAL CHIP | 470 | 5% | 1/10W (EXCEPT SE350/SE500R/SE600: A, N/SE700: G, I, R/SE800G) |
| R573 | 1-216-041-00 | METAL CHIP | 470 | 5% | 1/10W (EXCEPT SE350/SE500/SE600: A, N/SE700: G, I, R/SE800G) |
| R574 | 1-216-097-91 | RES, CHIP | 100K | 5% | 1/10W (EXCEPT SE350/SE500R/SE600: A, N/SE700: G, I, R/SE800G) |
| R575 | 1-216-097-91 | RES, CHIP | 100K | 5% | 1/10W (EXCEPT SE350/SE500/SE600: A, N/SE700: G, I, R/SE800G) |
| R580 | 1-216-049-91 | RES, CHIP | 1K | 5% | 1/10W (SE350/SE500) |
| R580 | 1-216-295-91 | SHORT | 0 (EXCEPT SE350/SE500) | | |
| R581 | 1-216-065-91 | RES, CHIP | 4.7K | 5% | 1/10W (SE350/SE500) |
| R582 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W (SE500K) |
| R583 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W (SE500K) |
| R584 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W (SE500K) |
| R585 | 1-216-097-91 | RES, CHIP | 100K | 5% | 1/10W (SE500K) |
| R586 | 1-216-097-91 | RES, CHIP | 100K | 5% | 1/10W (SE500K) |
| R587 | 1-216-097-91 | RES, CHIP | 100K | 5% | 1/10W (SE500K) |
| R590 | 1-216-049-91 | RES, CHIP | 1K | 5% | 1/10W |
| R591 | 1-216-049-91 | RES, CHIP | 1K | 5% | 1/10W (EXCEPT SE350/SE500) |
| R592 | 1-216-049-91 | RES, CHIP | 1K | 5% | 1/10W (EXCEPT SE350/SE500) |
| R593 | 1-216-097-91 | RES, CHIP | 100K | 5% | 1/10W (SE500K) |
| R594 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W (SE500K) |
| R595 | 1-216-057-00 | METAL CHIP | 2.2K | 5% | 1/10W (SE500K) |
| R596 | 1-216-077-91 | RES, CHIP | 15K | 5% | 1/10W (SE500K) |
| R611 | 1-216-049-91 | RES, CHIP | 1K | 5% | 1/10W (EXCEPT SE350/SE500R/SE600: A, N/SE700R) |
| R615 | 1-216-047-91 | RES, CHIP | 820 | 5% | 1/10W (EXCEPT SE350/SE500R/SE600: A, N/SE700R) |
| R617 | 1-216-049-91 | RES, CHIP | 1K | 5% | 1/10W |
| R618 | 1-216-055-00 | METAL CHIP | 1.8K | 5% | 1/10W |
| R624 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| R625 | 1-216-065-91 | RES, CHIP | 4.7K | 5% | 1/10W |
| R626 | 1-216-049-91 | RES, CHIP | 1K | 5% | 1/10W |
| R627 | 1-216-121-91 | RES, CHIP | 1M | 5% | 1/10W |
| R660 | 1-216-049-91 | RES, CHIP | 1K | 5% | 1/10W |
| R661 | 1-216-121-91 | RES, CHIP | 1M | 5% | 1/10W |
| R662 | 1-216-041-00 | METAL CHIP | 470 | 5% | 1/10W |
| R663 | 1-216-053-00 | METAL CHIP | 1.5K | 5% | 1/10W |
| R664 | 1-216-295-91 | SHORT | 0 | | |
| R666 | 1-216-295-91 | SHORT | 0 | | |
| R667 | 1-216-037-00 | METAL CHIP | 330 | 5% | 1/10W |
| R668 | 1-216-025-91 | RES, CHIP | 100 | 5% | 1/10W |
| R669 | 1-216-025-91 | RES, CHIP | 100 | 5% | 1/10W |
| R670 | 1-216-041-00 | METAL CHIP | 470 | 5% | 1/10W |
| R671 | 1-216-295-91 | SHORT | 0 | | |
| R672 | 1-216-049-91 | RES, CHIP | 1K | 5% | 1/10W (SE350/SE500/SE600: B, N/SE700: B, K, N, R /SE800: B, K, N/SX700B) |
| R700 | 1-216-057-00 | METAL CHIP | 2.2K | 5% | 1/10W (SE700R) |
| R701 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W (SE700R) |
| R702 | 1-216-295-91 | SHORT | 0 (EXCEPT SE700R) | | |
| R703 | 1-216-025-91 | RES, CHIP | 100 | 5% | 1/10W (SE700R) |
| R704 | 1-216-025-91 | RES, CHIP | 100 | 5% | 1/10W |
| R705 | 1-216-033-00 | METAL CHIP | 220 | 5% | 1/10W |
| R711 | 1-212-897-00 | FUSIBLE | 470 | 5% | 1/4W |
| R713 | 1-216-025-91 | RES, CHIP | 100 | 5% | 1/10W |
| R714 | 1-216-113-00 | METAL CHIP | 470K | 5% | 1/10W |
| R720 | 1-216-049-91 | RES, CHIP | 1K | 5% | 1/10W (SE700R) |
| R721 | 1-216-049-91 | RES, CHIP | 1K | 5% | 1/10W (SE700R) |
| R722 | 1-216-049-91 | RES, CHIP | 1K | 5% | 1/10W (SE700R) |
| R723 | 1-216-097-91 | RES, CHIP | 100K | 5% | 1/10W |
| R724 | 1-216-061-00 | METAL CHIP | 3.3K | 5% | 1/10W |
| R725 | 1-216-081-00 | METAL CHIP | 22K | 5% | 1/10W |
| R726 | 1-216-097-91 | RES, CHIP | 100K | 5% | 1/10W |
| R730 | 1-216-041-00 | METAL CHIP | 470 | 5% | 1/10W (EXCEPT SE350/SE500/SE700R) |
| R731 | 1-216-041-00 | METAL CHIP | 470 | 5% | 1/10W (EXCEPT SE350/SE500/SE700: G, R/SE800G) |
| R732 | 1-216-041-00 | METAL CHIP | 470 | 5% | 1/10W (EXCEPT SE350/SE500/SE700R) |
| R733 | 1-216-041-00 | METAL CHIP | 470 | 5% | 1/10W (EXCEPT SE700G/SE800G) |
| R754 | 1-216-025-91 | RES, CHIP | 100 | 5% | 1/10W |
| R755 | 1-216-025-91 | RES, CHIP | 100 | 5% | 1/10W |
| R756 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| R757 | 1-216-049-91 | RES, CHIP | 1K | 5% | 1/10W |

# MA-373

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| R800 | 1-216-101-00 | METAL CHIP 150K 5% 1/10W | (EXCEPT SE600/SE700R/SX600) |
| R801 | 1-216-073-00 | METAL CHIP 10K 5% 1/10W | (EXCEPT SE600/SE700R/SX600) |
| R802 | 1-216-073-00 | METAL CHIP 10K 5% 1/10W | (EXCEPT SE600/SE700R/SX600) |
| R803 | 1-216-081-00 | METAL CHIP 22K 5% 1/10W | (EXCEPT SE600/SE700R/SX600) |
| R804 | 1-216-073-00 | METAL CHIP 10K 5% 1/10W | (EXCEPT SE600/SE700R/SX600) |
| R805 | 1-216-073-00 | METAL CHIP 10K 5% 1/10W | (EXCEPT SE600/SE700R/SX600) |
| R806 | 1-216-073-00 | METAL CHIP 10K 5% 1/10W | (EXCEPT SE600/SE700R/SX600) |
| R807 | 1-216-085-00 | METAL CHIP 33K 5% 1/10W | (EXCEPT SE600/SE700R/SX600) |
| R813 | 1-216-073-00 | METAL CHIP 10K 5% 1/10W | (EXCEPT SE600/SE700R/SX600) |
| R850 | 1-216-025-91 | RES, CHIP 100 5% 1/10W | (EXCEPT SE500R/SE600/SE700R/SX600) |
| R851 | 1-216-077-91 | RES, CHIP 15K 5% 1/10W | (EXCEPT SE500R/SE600/SE700R/SX600) |
| R852 | 1-216-081-00 | METAL CHIP 22K 5% 1/10W | (EXCEPT SE500R/SE600/SE700R/SX600) |
| R853 | 1-216-049-91 | RES, CHIP 1K 5% 1/10W | (EXCEPT SE500R/SE600/SE700R/SX600) |
| R856 | 1-216-097-91 | RES, CHIP 100K 5% 1/10W | (EXCEPT SE500R/SE600/SE700R/SX600) |
| R857 | 1-216-069-00 | METAL CHIP 6.8K 5% 1/10W | (EXCEPT SE500R/SE600/SE700R/SX600) |
| R858 | 1-216-069-00 | METAL CHIP 6.8K 5% 1/10W | (EXCEPT SE500R/SE600/SE700R/SX600) |
| R859 | 1-216-123-11 | METAL CHIP 1.2M 5% 1/10W | (EXCEPT SE500R/SE600/SE700R/SX600) |
| R860 | 1-216-123-11 | METAL CHIP 1.2M 5% 1/10W | (EXCEPT SE500R/SE600/SE700R/SX600) |
| R861 | 1-216-117-00 | METAL CHIP 680K 5% 1/10W | (EXCEPT SE500R/SE600/SE700R/SX600) |
| R862 | 1-216-057-00 | METAL CHIP 2.2K 5% 1/10W | (EXCEPT SE500R/SE600/SE700R/SX600) |
| R968 | 1-216-101-00 | METAL CHIP 150K 5% 1/10W | (SE600B/SE700B/SE800B/SX700B) |
| R969 | 1-216-069-00 | METAL CHIP 6.8K 5% 1/10W | (SE600B/SE700B/SE800B/SX700B) |
| R970 | 1-216-085-00 | METAL CHIP 33K 5% 1/10W | (SE600B/SE700B/SE800B/SX700B) |
| R971 | 1-216-085-00 | METAL CHIP 33K 5% 1/10W | (SE600B/SE700B/SE800B/SX700B) |
| R972 | 1-216-083-00 | METAL CHIP 27K 5% 1/10W | (SE600B/SE700B/SE800B/SX700B) |
| R973 | 1-216-105-91 | RES, CHIP 220K 5% 1/10W | (SE600B/SE700B/SE800B/SX700B) |
| R974 | 1-216-081-00 | METAL CHIP 22K 5% 1/10W | (SE600B/SE700B/SE800B/SX700B) |
| R975 | 1-216-295-91 | SHORT 0 | (SE600B/SE700B/SE800B/SX700B) |
| R976 | 1-216-059-00 | METAL CHIP 2.7K 5% 1/10W | (SE600B/SE700B/SE800B/SX700B) |
| R977 | 1-216-089-91 | RES, CHIP 47K 5% 1/10W | (SE600B/SE700B/SE800B/SX700B) |
| R978 | 1-216-071-00 | METAL CHIP 8.2K 5% 1/10W | (SE600B/SE700B/SE800B/SX700B) |
| R979 | 1-216-073-00 | METAL CHIP 10K 5% 1/10W | (SE600B/SE700B/SE800B/SX700B) |
| R980 | 1-216-097-91 | RES, CHIP 100K 5% 1/10W | (SE600B/SE700B/SE800B/SX700B) |
| R981 | 1-216-083-00 | METAL CHIP 27K 5% 1/10W | (SE600B/SE700B/SE800B/SX700B) |
| R982 | 1-216-089-91 | RES, CHIP 47K 5% 1/10W | (SE600B/SE700B/SE800B/SX700B) |
| R983 | 1-216-067-00 | METAL CHIP 5.6K 5% 1/10W | (SE600B/SE700B/SE800B/SX700B) |
| R985 | 1-216-041-00 | METAL CHIP 470 5% 1/10W | (SE600B/SE700B/SE800B/SX700B) |
| R986 | 1-216-089-91 | RES, CHIP 47K 5% 1/10W | (SE600B/SE700B/SE800B/SX700B) |
| R988 | 1-216-077-91 | RES, CHIP 15K 5% 1/10W | (SE600B/SE700B/SE800B/SX700B) |
| R989 | 1-216-049-91 | RES, CHIP 1K 5% 1/10W | (SE600B/SE700B/SE800B/SX700B) |
| R990 | 1-216-295-91 | SHORT 0 | (SE600B/SE700B/SE800B/SX700B) |
| R993 | 1-216-071-00 | METAL CHIP 8.2K 5% 1/10W | (SE600B/SE700B/SE800B/SX700B) |
| R994 | 1-216-689-11 | METAL CHIP 39K 0.5% 1/10W | (SE600B/SE700B/SE800B/SX700B) |
| R995 | 1-216-073-00 | METAL CHIP 10K 5% 1/10W | (SE600B/SE700B/SE800B/SX700B) |
| R996 | 1-216-689-11 | METAL CHIP 39K 0.5% 1/10W | (SE600B/SE700B/SE800B/SX700B) |
| R997 | 1-216-073-00 | METAL CHIP 10K 5% 1/10W | (SE600B/SE700B/SE800B/SX700B) |
| R998 | 1-216-073-00 | METAL CHIP 10K 5% 1/10W | (SE600B/SE700B/SE800B/SX700B) |
| R999 | 1-216-295-91 | SHORT 0 | (SE600B/SE700B/SE800B/SX700B) |
|  |  | < SWITCH > |  |
| S100 | 1-771-155-11 | SWITCH, ROTARY (CAM ENCODER) |  |
| S101 | 1-571-958-11 | SWITCH, PUSH (1 KEY) (REC PROOF) |  |
| S460 | 1-771-574-21 | SWITCH, TACTILE (I/⏻) |  |
| S461 | 1-771-574-21 | SWITCH, TACTILE (⏏ EJECT) |  |
| S463 | 1-771-574-21 | SWITCH, TACTILE (PROGRAM/TRACKING +) |  |
| S464 | 1-771-574-21 | SWITCH, TACTILE (AUDIO DUB) | (SE500/SE800/SX800) |
| S465 | 1-771-574-21 | SWITCH, TACTILE (RR) | (SE500/SE650/SE700/SE800/SX700/SX800) |
| S467 | 1-571-588-11 | SWITCH, SLIDE (NTSC PB) |  |
| S476 | 1-771-574-21 | SWITCH, TACTILE (PROGRAM/TRACKING -) |  |
| S477 | 1-771-574-21 | SWITCH, TACTILE | (AUTO SET UP/RF CHANNEL) |
| S478 | 1-771-574-21 | SWITCH, TACTILE (SYNCHRO REC) | (SE500K/SE800/SX800) |
|  |  | < TRANSFORMER > |  |
| T380 | 1-433-479-11 | TRANSFORMER, BIAS OSCILLATION | (EXCEPT SE500/SE800/SX800) |
| T380 | 1-433-538-11 | TRANSFORMER, BIAS OSCILLATION | (SE500/SE800/SX800) |
| T390 | 1-433-537-11 | TRANSFORMER, BIAS OSCILLATION | (SE500/SE800/SX800) |
|  |  | < TUNER > |  |
| TU701 | 1-693-480-11 | TUNER, IF (BTF-2MC422) | (SE350/SE500/SE700R) |
| TU702 | 1-693-436-51 | TUNER, IF (BTF-3WC428) | (SE600: E, N/SE700: E1, E2, I, N/ SE800: E, N/SX600/SX700E) |

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| TU702 | 1-693-437-51 | TUNER, IF (BTF-3WU604) (SE700G/SE800G) | |
| TU702 | 1-693-438-51 | TUNER, IF (BTF-3WC446) (SE600B/SE700B/SE800B/SX700B) | |
| TU702 | 1-693-439-61 | TUNER, IF (BTF-3WC429) (SE600A/SE650/SE700: D1, D2, K/SE800: D1, D2, K/SX700D/SX800) | |
| | | < VIBRATOR > | |
| X160 | 1-579-463-11 | VIBRATOR, CRYSTAL (32.768kHz) | |
| X161 | 1-781-717-21 | VIBRATOR, CRYSTAL (17.734475MHz) | |
| X200 | 1-579-608-21 | VIBRATOR, CRYSTAL (4.43MHz) | |
| | 1-468-458-11 | POWER BLOCK (SRV938EK)<br>************************<br>(Ref.No. 2,000 Series) | |
| | | < CAPACITOR > | |
| ⚠C101 | 9-885-001-69 | METAL 0.1uF | |
| ⚠C102 | 9-885-001-69 | METAL 0.1uF | |
| ⚠C103 | 9-885-001-70 | CERAMIC 1000PF | 250V |
| ⚠C104 | 9-885-001-70 | CERAMIC 1000PF | 250V |
| ⚠C105 | 9-885-001-70 | CERAMIC 1000PF | 250V |
| ⚠C108 | 9-885-001-70 | CERAMIC 1000PF | 250V |
| ⚠C109 | 9-885-001-70 | CERAMIC 1000PF | 250V |
| C151 | 9-885-001-81 | ELECT 47uF | 400V |
| C153 | 1-163-015-91 | CERAMIC CHIP 3300PF | |
| C155 | 1-126-965-91 | ELECT 22uF | 50V |
| C156 | 1-126-960-91 | ELECT 1uF | 50V |
| C157 | 1-163-009-91 | CERAMIC CHIP 1000PF | |
| C158 | 1-163-273-91 | CERAMIC CHIP 820PF | |
| C159 | 1-163-251-91 | CERAMIC CHIP 100PF | |
| C160 | 1-163-021-91 | CERAMIC CHIP 10000PF | |
| C161 | 1-163-009-91 | CERAMIC CHIP 1000PF | |
| C201 | 9-885-001-91 | ELECT 220uF | 25V |
| C202 | 1-126-925-91 | ELECT 470uF | 10V |
| C203 | 1-126-934-91 | ELECT 220uF | 16V |
| C206 | 1-126-947-91 | ELECT 47uF | 35V |
| C207 | 1-126-964-91 | ELECT 10uF | 50V |
| C208 | 1-126-925-91 | ELECT 470uF | 10V |
| C209 | 1-163-021-91 | CERAMIC 0.01uF | 50V |
| C212 | 1-163-021-91 | CERAMIC 0.01uF | 50V |
| C213 | 1-126-956-91 | ELECT 0.1uF | 50V |
| C251 | 1-126-967-91 | ELECT 47uF | 50V |
| C252 | 1-111-065-11 | ELECT 680uF | 25V |
| C253 | 1-111-016-91 | ELECT 1200uF | 10V |
| C254 | 9-885-001-92 | ELECT 470uF | 25V |
| C261 | 1-164-489-91 | CERAMIC CHIP 0.22uF | 16V |
| C301 | 1-111-118-91 | ELECT 220uF | 50V |
| C303 | 1-126-965-91 | ELECT 22uF | 50V |
| | | < CONNECTOR > | |
| ⚠CN101 | 1-580-230-11 | CONNECTOR | |
| CN201 | 1-778-675-21 | CONNECTOR 19P | |
| CN202 | 1-793-674-21 | CONNECTOR 7P | |
| | | < DIODE > | |
| ⚠D101 | 9-880-927-01 | DIODE 1N4005 | |
| ⚠D102 | 9-880-927-01 | DIODE 1N4005 | |
| ⚠D103 | 9-880-927-01 | DIODE 1N4005 | |
| ⚠D104 | 9-880-927-01 | DIODE 1N4005 | |
| D151 | 9-885-001-77 | DIODE P6KE300 | |
| D152 | 9-885-001-78 | DIODE UF4007 | |
| D153 | 9-885-001-79 | DIODE 1SS119 | |
| D154 | 9-885-001-80 | DIODE PR1003 | |
| D158 | 9-880-991-01 | DIODE MA4270 | |
| D203 | 9-885-001-86 | DIODE MTZJ5.1 | |
| D204 | 9-885-001-79 | DIODE 1SS119 | |
| D205 | 9-885-001-79 | DIODE 1SS119 | |
| D251 | 9-885-001-80 | DIODE PR1003 | |
| D252 | 9-885-001-87 | DIODE UF3DL | |
| D253 | 9-885-001-88 | DIODE SB340L | |
| D254 | 9-885-001-80 | DIODE PR1003 | |
| D301 | 9-885-001-87 | DIODE UF3DL | |
| D302 | 9-885-001-89 | DIODE D2S4M | |
| D303 | 9-885-001-90 | DIODE MTZJ20 | |
| D304 | 9-885-001-89 | DIODE D2S4M | |
| D307 | 9-885-001-89 | DIODE D2S4M | |
| | | < FUSE > | |
| ⚠F101 | 9-885-001-72 | FUSE (T2AL/250V) | |
| | | < IC > | |
| ⚠IC151 | 9-885-001-74 | IC TDA16846 | |
| IC251 | 9-885-001-82 | IC AN1431T | |
| | | < LINE FILTER/COIL > | |
| ⚠L101 | 9-885-001-67 | LINE FILTER 10uH | |
| ⚠L102 | 9-885-001-68 | LINE FILTER 33mH | |
| ⚠L103 | 9-885-001-68 | LINE FILTER 33mH | |
| L201 | 9-885-001-93 | CHOKE COIL 10uH | |
| L202 | 9-885-001-93 | CHOKE COIL 10uH | |
| L205 | 9-885-001-94 | CHOKE COIL 1uH | |
| | | < PHOTO COUPLER > | |
| ⚠PC151 | 9-885-001-75 | COUPLER, PHOTO ON3171 | |
| | | < IC LINK > | |
| ⚠PS201 | 1-533-592-21 | LINK, IC (1.6A) | |
| ⚠PS202 | 1-533-593-21 | LINK, IC (2A) | |
| ⚠PS251 | 1-533-589-21 | LINK, IC (750mA) | |
| | | < TRANSISTOR > | |
| ⚠Q151 | 9-885-001-73 | TRANSISTOR 2SK3047 | |
| ⚠Q201 | 8-729-141-01 | TRANSISTOR 2SB733 | |
| Q203 | 8-729-030-98 | TRANSISTOR 2PD601A | |
| Q204 | 8-729-139-97 | TRANSISTOR 2SC2785 | |
| Q205 | 8-729-018-99 | TRANSISTOR 2SD2394 | |
| Q206 | 8-729-139-97 | TRANSISTOR 2SC2785 | |
| Q207 | 9-885-001-83 | TRANSISTOR 2SD1862 | |
| Q210 | 8-729-043-32 | TRANSISTOR DTA114EKA | |
| Q211 | 8-729-043-29 | TRANSISTOR DTC114EKA | |
| Q301 | 8-729-018-99 | TRANSISTOR 2SD2394 | |
| Q302 | 9-885-001-84 | TRANSISTOR DTC143EKA | |
| Q303 | 8-729-018-99 | TRANSISTOR 2SD2394 | |

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

## POWER BLOCK

| Ref. No. | Part No. | Description | | Remark |
|---|---|---|---|---|
| Q304 | 8-729-139-97 | TRANSISTOR | 2SC2785 | |
| ⚠Q305 | 8-729-141-01 | TRANSISTOR | 2SB733 | |
| Q306 | 9-885-001-84 | TRANSISTOR | DTC143EKA | |
| Q307 | 9-885-001-85 | TRANSISTOR | 2SA1015 | |
| | | < RESISTOR > | | |
| ⚠R101 | 9-885-001-71 | CARBON | 1M | 1/2W |
| R151 | 1-247-903-91 | CARBON | 1M | 1/4W |
| R152 | 1-247-903-91 | CARBON | 1M | 1/4W |
| R155 | 1-216-073-21 | RES, CHIP | 10K | 1/10W |
| R156 | 1-259-880-91 | CARBON | 2.2M | 1/4W |
| R157 | 1-259-880-91 | CARBON | 2.2M | 1/4W |
| R158 | 1-247-805-91 | CARBON | 82 | 1/4W |
| R159 | 1-249-397-11 | CARBON | 22 | 1/4W F |
| R160 | 1-247-795-91 | CARBON | 33 | 1/4W |
| R161 | 1-216-085-21 | RES, CHIP | 33K | 1/10W |
| R162 | 1-216-085-21 | RES, CHIP | 33K | 1/10W |
| R163 | 1-216-063-21 | RES, CHIP | 3.9K | 1/10W |
| R164 | 1-247-861-91 | CARBON | 18K | 1/4W |
| R201 | 1-216-049-21 | RES, CHIP | 1K | 1/10W |
| R203 | 1-216-452-21 | METAL | 180 | 2W |
| R206 | 1-216-053-21 | RES, CHIP | 1.5K | 1/10W |
| R207 | 1-247-615-91 | CARBON | 220 | 1/4W |
| R208 | 1-247-615-91 | CARBON | 220 | 1/4W |
| R209 | 1-247-615-91 | CARBON | 220 | 1/4W |
| R210 | 1-216-049-21 | RES, CHIP | 1K | 1/10W |
| R213 | 1-216-089-21 | RES, CHIP | 47K | 1/10W |
| R216 | 1-216-065-21 | RES, CHIP | 4.7K | 1/10W |
| R217 | 1-215-857-81 | METAL | 10 | 1W |
| R218 | 1-215-908-81 | METAL | 33 | 3W |
| R219 | 1-247-847-91 | CARBON | 4.7K | 1/4W |
| R220 | 1-216-065-21 | RES, CHIP | 4.7K | 1/10W |
| R222 | 1-247-615-91 | CARBON | 220 | 1/4W |
| R251 | 1-249-402-11 | CARBON | 56 | 1/4W F |
| R261 | 1-216-049-21 | RES, CHIP | 1K | 1/10W |
| R263 | 1-216-079-21 | RES, CHIP | 18K | 1/10W |
| R264 | 1-216-077-21 | RES, CHIP | 15K | 1/10W |
| R265 | 1-216-073-21 | RES, CHIP | 10K | 1/10W |
| R266 | 1-216-061-21 | RES, CHIP | 3.3K | 1/10W |
| R301 | 1-216-073-21 | RES, CHIP | 10K | 1/10W |
| R302 | 1-215-869-81 | METAL | 1K | 1W |
| R306 | 1-216-073-21 | RES, CHIP | 10K | 1/10W |
| R307 | 1-215-869-81 | METAL | 1K | 1W |
| R308 | 1-216-049-21 | RES, CHIP | 1K | 1/10W |
| R311 | 1-247-885-91 | CARBON | 10K | 1/4W |
| R312 | 1-215-880-81 | METAL | 10 | 2W |
| R313 | 1-215-880-81 | METAL | 10 | 2W |
| R314 | 1-215-892-81 | METAL | 1K | 2W |
| R315 | 1-215-892-81 | METAL | 1K | 2W |
| R316 | 1-247-879-91 | CARBON | 100K | 1/4W |
| | | < TRANSFORMER > | | |
| ⚠T151 | 9-885-001-76 | TRANSFORMER, POWER | | |
| | | < VARIABLE RESISTOR > | | |
| VR251 | 1-241-629-11 | VARIABLE RESISTOR | 5K | |

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| | | < VARISTOR > | |
| ⚠Z101 | 9-880-928-01 | VARISTOR ERZV10D751 | |

MISCELLANEOUS
***************

| Ref. No. | Part No. | Description |
|---|---|---|
| 13 | 1-792-020-11 | CABLE, FLAT (FDS-7) (SE500/SE800/SX800) |
| 13 | 1-792-021-11 | CABLE, FLAT (FDS-8) (EXCEPT SE500/SE800/SX800) |
| 15 | 1-762-844-31 | SWITCH, ROTARY (SE500/SE800/SX800) |
| 56 | 1-792-022-11 | CABLE, FLAT (FFM-001) |
| 57 | 1-792-018-11 | CABLE, FLAT (FAC-8) |
| ⚠58 | 1-782-012-11 | CORD, POWER |
| 704 | 1-500-144-11 | HEAD, FE |
| 721 | A-6775-791-A | HEAD BLOCK ASSY, ACE FFC |
| 768 | 1-772-361-11 | DRUM ASSY, DZH-92D (SE350) |
| 768 | 1-772-362-11 | DRUM ASSY, DZH-93D (SE500) |
| 768 | 1-772-364-11 | DRUM ASSY, DZH0B5A (EXCEPT SE350/ SE500/SE600B/SE700B/SE800B/SX700B) |
| 768 | 1-772-365-11 | DRUM ASSY, DZH0B6A (SE600B/SE700B/SE800B/SX700B) |
| M902 | 1-698-971-11 | MOTOR, DC (CAPSTAN) |
| M903 | X-3947-577-1 | MOTOR ASSY, CAM |

**************
HARDWARE LIST
**************

| Ref. No. | Part No. | Description |
|---|---|---|
| #1 | 7-685-648-79 | SCREW +BVTP 3X12 TYPE2 |
| #2 | 7-682-147-01 | SCREW +P 3X6 |
| #3 | 7-685-646-79 | SCREW +BVTP 3X8 TYPE2 IT-3 |
| #4 | 7-685-133-19 | SCREW (DIA. 2.6) (IT3B) |

ACCESSORIES & PACKING MATERIALS
*******************************

| Ref. No. | Part No. | Description |
|---|---|---|
| | 1-696-593-11 | CORD, CONNECTION (PAL) (1.5m) |
| ⚠ | 1-770-019-11 | ADAPTOR, CONVERSION PLUG 3P (SE700: G, I/SE800G) |
| | 3-868-269-11 | MANUAL, INSTRUCTION (FRENCH) (SE800:D2, E) |
| | 3-868-269-21 | MANUAL, INSTRUCTION (SPANISH)(SE800E) |
| | 3-868-269-31 | MANUAL, INSTRUCTION (GERMAN) (SE800: D1, D2, E/SX800) |
| | 3-868-269-41 | MANUAL, INSTRUCTION (ITALIAN) (SE800D2/SX800) |
| | 3-868-269-51 | MANUAL, INSTRUCTION (DUTCH) (SE800: D2, E/SX800) |
| | 3-868-269-61 | MANUAL, INSTRUCTION (PORTUGUESE) (SE800E) |
| | 3-868-269-71 | MANUAL, INSTRUCTION (GREEK) (SE800D2) |
| | 3-868-270-11 | MANUAL, INSTRUCTION (SWEDISH) (SE800E) |
| | 3-868-270-21 | MANUAL, INSTRUCTION (DANISH) (SE800E) |
| | 3-868-270-31 | MANUAL, INSTRUCTION (FINNISH) (SE800E) |
| | 3-868-271-11 | MANUAL, INSTRUCTION (FRENCH) (SE800B) |
| | 3-868-272-11 | MANUAL, INSTRUCTION (ENGLISH) (SE800G) |
| | 3-868-273-11 | MANUAL, INSTRUCTION (FRENCH) (SE600E/SE700: D2, E2/SX700: D, E) |
| | 3-868-273-21 | MANUAL, INSTRUCTION (SPANISH) (SE600E/SE700E1/SX600/SX700E) |

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
|  | 3-868-273-31 | MANUAL, INSTRUCTION (GERMAN) (SE600: A, E/SE650/SE700: D1, D2, E2/SX700: D, E) |  |
|  | 3-868-273-41 | MANUAL, INSTRUCTION (ITALIAN) (SE600A/SE700D2/SX700D) |  |
|  | 3-868-273-51 | MANUAL, INSTRUCTION (DUTCH) (SE600: A, E/SE700: D2, E2/SX700: D, E) |  |
|  | 3-868-273-61 | MANUAL, INSTRUCTION (PORTUGUESE) (SE700E1/SX700E) |  |
|  | 3-868-273-71 | MANUAL, INSTRUCTION (GREEK) (SE600A/SE700D2) |  |
|  | 3-868-274-11 | MANUAL, INSTRUCTION (SWEDISH) (SE600E/SE700E2/SX600/SX700E) |  |
|  | 3-868-274-21 | MANUAL, INSTRUCTION (DANISH) (SE600E/SE700E2/SX600/SX700E) |  |
|  | 3-868-274-31 | MANUAL, INSTRUCTION (FINNISH) (SE600E/SE700E2/SX600/SX700E) |  |
|  | 3-868-275-11 | MANUAL, INSTRUCTION (ENGLISH) (SE700: G, I) |  |
|  | 3-868-277-11 | MANUAL, INSTRUCTION (ENGLISH) (SE350/SE500/SE600N/SE700: K, N, R/SE800: K, N) |  |
|  | 3-868-277-21 | MANUAL, INSTRUCTION (CZECH) (SE350/SE500K/SE600N/SE700K/SE800K) |  |
|  | 3-868-277-31 | MANUAL, INSTRUCTION (POLISH) (SE350/SE500K/SE600N/SE700N/SE800N) |  |
|  | 3-868-277-41 | MANUAL, INSTRUCTION (HUNGARIAN) (SE350/SE500K/SE600N/SE700N/SE800N) |  |
|  | 3-868-277-51 | MANUAL, INSTRUCTION (RUSSIAN) (SE500R/SE700R/SE800K) |  |
|  | 3-868-352-11 | MANUAL, INSTRUCTION (FRENCH) (SE600B/SE700B/SX700B) |  |

9-921-751-11

**Sony Corporation**
**Home Video Division Company**

2000B057564-1
Printed in Hungary © 2000. 2
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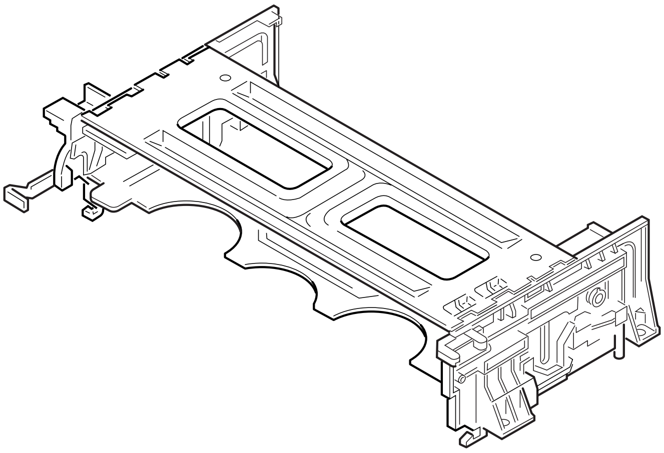
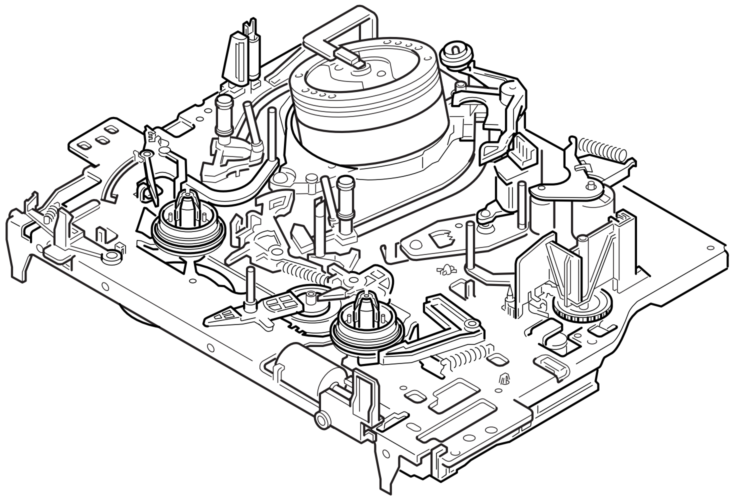
# VHS MECHANICAL ADJUSTMENT MANUAL Ⅵ

## S MECHANISM

Please use with the service manual.





## VHS TAPE TRANSPORT MECHANISM DECK

MICROFILM

SONY®

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## ADJUSTMENTS REQUIRED THE FOLLOWING PARTS REPLACEMENT

| ADJUSTMENTS / PARTS | | 4-1-1 | 4-1-2 | 4-1-3 | 4-1-4 | 4-1-5 | 4-1-6 | 4-1-7 | 4-1-8 |
|---|---|---|---|---|---|---|---|---|---|
| | | TENSION REGULATOR POSITION/TENSION ADJUSTMENT | CHECKING THE TENSION AND TORQUE | X-VALUE ADJUSTMENT | HEIGHT ADJUSTMENT OF GUIDE ROLLERS NO. 3 AND NO. 6 | ACE HEAD HEIGHT AND AZIMUTH ADJUSTMENT | X-VALUE FINE ADJUSTMENT | HEIGHT ADJUSTMENT OF GUIDE ROLLER NO. 8 | CHECKING THE LINEARITY AND FLUCTUATION OF THE RF OUTPUT |
| **3-25** | REEL (S) TABLE | O | △ | ✕ | △ | ✕ | ✕ | ✕ | ✕ |
| **3-25** | TG1 ASSEMBLY | O | ✕ | ✕ | △ | ✕ | ✕ | ✕ | ✕ |
| **3-6** | FEH ASSEMBLY | ✕ | ✕ | ✕ | △ | ✕ | ✕ | ✕ | ✕ |
| **3-23** | DRUM BASE | ✕ | ✕ | O | O | O | O | O | O |
| **3-2** | DRUM ASSEMBLY | ✕ | ✕ | O | O | O | O | O | O |
| **3-24** | SHUTTLE (S) AND SHUTTLE (T) BLOCK ASSEMBLIES | ✕ | ✕ | O | O | O | O | O | ✕ |
| **3-5** | ACE HEAD BLOCK | ✕ | ✕ | O | △ | O | O | △ | ✕ |
| **3-4** | CAPSTAN MOTOR | ✕ | ✕ | ✕ | △ | O | O | O | ✕ |
| **3-3** | PINCHI PRESS BLOCK ASS'Y | ✕ | ✕ | ✕ | ✕ | O | O | O | ✕ |
| **3-3** | TG8 ASSEMBLY | ✕ | ✕ | ✕ | ✕ | ✕ | ✕ | O | ✕ |
| **3-10** | REEL (T) TABLE | ✕ | ✕ | ✕ | ✕ | ✕ | ✕ | △ | ✕ |
| **3-19** | PULLEY GEAR ASSEMBLY | ✕ | O | ✕ | ✕ | ✕ | ✕ | ✕ | ✕ |
| **3-11** | PENDULUM ARM ASSEMBLY | ✕ | O | ✕ | ✕ | ✕ | ✕ | ✕ | ✕ |

**O**: ADJUST
△: CHECK
**✕**: NOT REQUIRED

# 1. PREPARATION FOR MECHANISM CHECKS, ADJUSTMENTS AND REPLACEMENT

For removal of the cabinet, printed wiring boards and others, please refer to the service manual "DISASSEMBLY".

## 1-1. LOADING AND THREADING PROCEDURE WHEN THE POWER TURNS OFF

### 1-1-1. LOADING AND THREADING PROCEDURE WITH HANDS

1) Turn cam motor in the arrow Ⓐ direction until loading and threading are end.

### 1-1-2. LOADING AND THREADING PROCEDURE WITH REGULATED DC POWER SUPPLY

1) Applying approx. +9V (300mA) to cam motor with regulated DC power supply makes it loading and threading.

**Note :** When loading and threading without cassette, claws are caught in four positions as following figure (in the order ①-②-③-④).
So release them with hands.

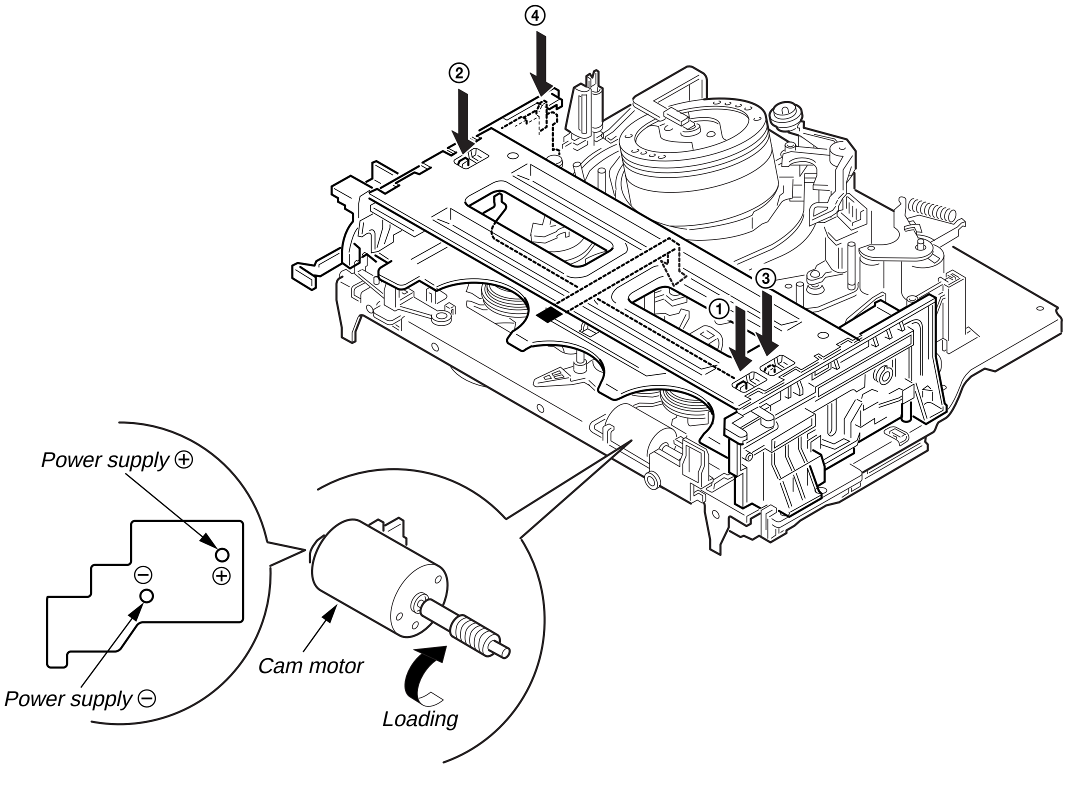


Fig. 1-1

## 1-2. UNLOADING AND UNTHREADING PROCEDURE WHEN THE POWER TURNS OFF

### 1-2-1. UNLOADING AND UNTHREADING PROCEDURE WITH HANDS

1) Turn cam motor in the arrow Ⓑdirection until unthreading is end.
2) Turn capstan motor in the arrow Ⓒdirection to take up tape in cassette.
3) Turn cam motor in the arrow Ⓑdirection until unloading is end.

### 1-2-2. UNLOADING AND UNTHREADING PROCEDURE WITH REGULATED DC POWER SUPPLY

1) Apply approx. +5V (300mA) to contrary polarities of cam motor.
2) Unthreading operation begins, tape guides return to their initial positions (Unthreading operation is end but tape remains), then stop cam motor by turning power off.

**Note :** When unloading begins and cassette lid is closed, turn cam motor in the arrow Ⓐdirection to open tape guard.

3) Turn capstan motor in the arrow Ⓒdirection to take up tape in cassette.

**Note :** Take care that tape is not caught at pinch roller.

4) Check that tape is no loosened completely, and apply approx. +5V (300mA) to contrary polarities of cam motor with regulated DC power supply.

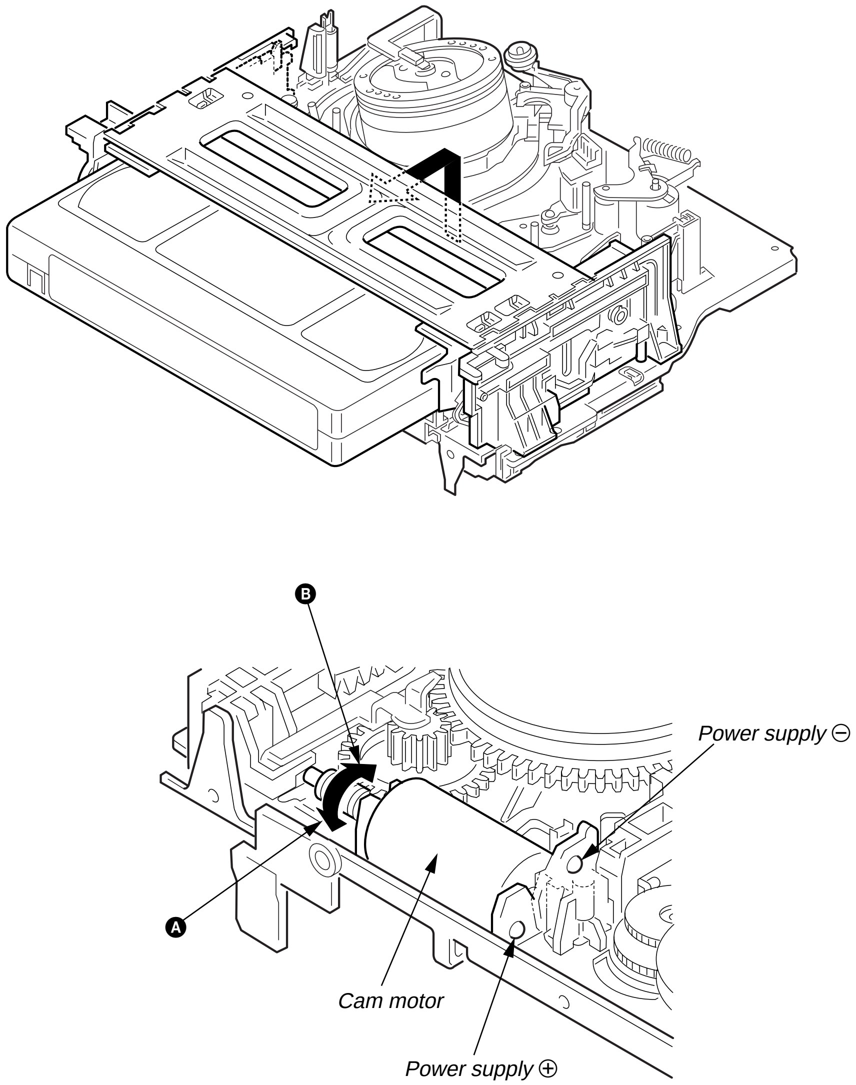


*Fig. 1-2*

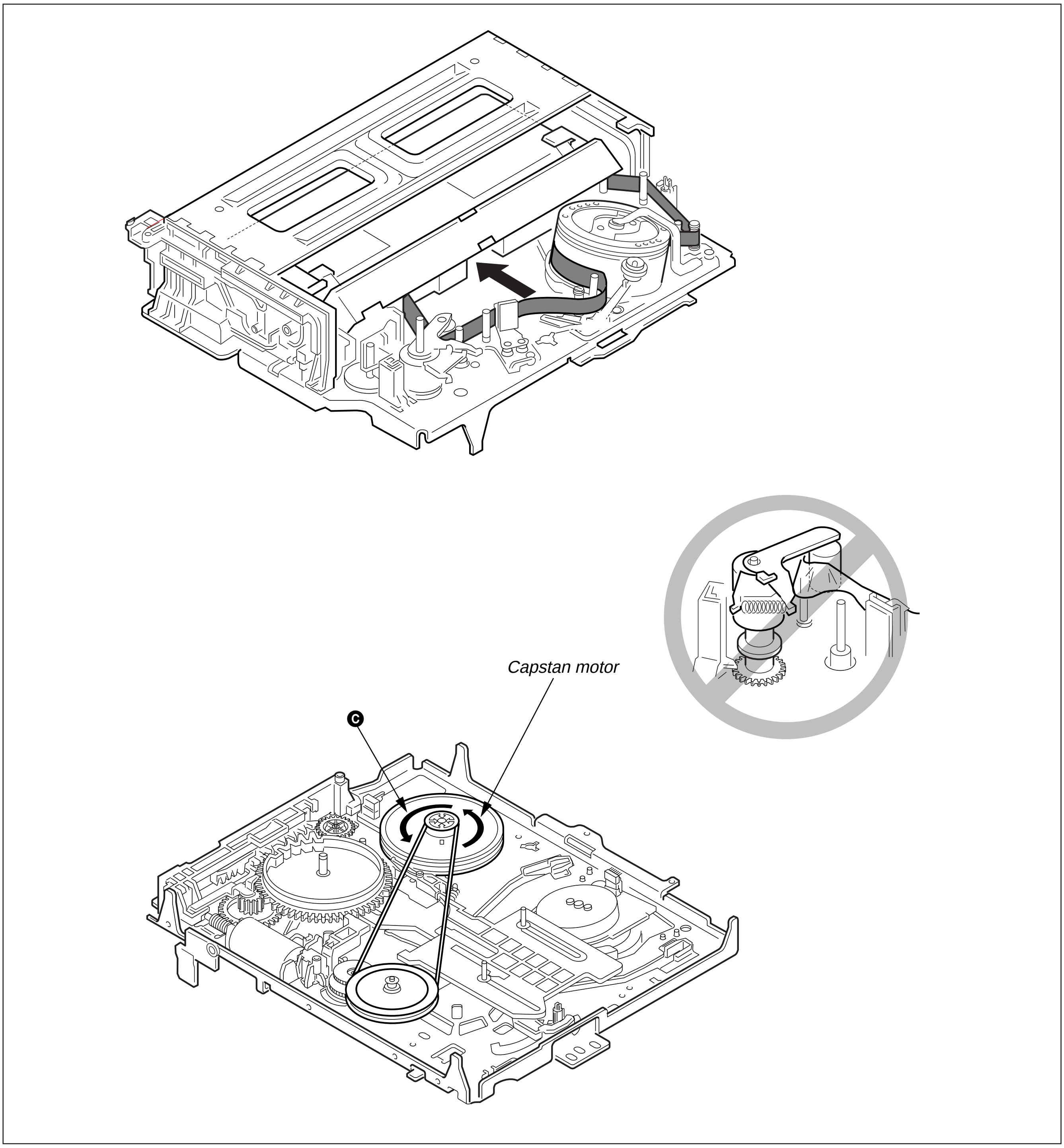

Capstan motor
C

Fig. 1-3

## 1-3. HOW TO COMPLETE THREADING WITHOUT CASSETTE COMPARTMENT

**Note 1 :** Put the FL block assembly removed the FL top plate on the bottom not to put dust or grease the top sensor and the end sensor luminous plates or not to scratch them.

1) Pull out AC plug from wall outlet.
2) Shade near the end and top sensors with a black masking tape or the like.
3) Connect AC plug to wall outlet.

**Note 2 :** In this condition, some modes can not be set.
To make loading in this condition, set the video cassette tape without REC proof claw, pull the REC proof lever once and release it.
On loading without video cassette tape, it is necessary to deceive the microcomputer by turning the reel (T) table with hand.
Fast forward and rewind are not available.

**Note 3 :** After above mentioned operation, be sure to return the mode in the following order.

4) Pull out AC plug from wall outlet to reset the system control microcomputer.
5) Remove the tape near the end and top sensors.

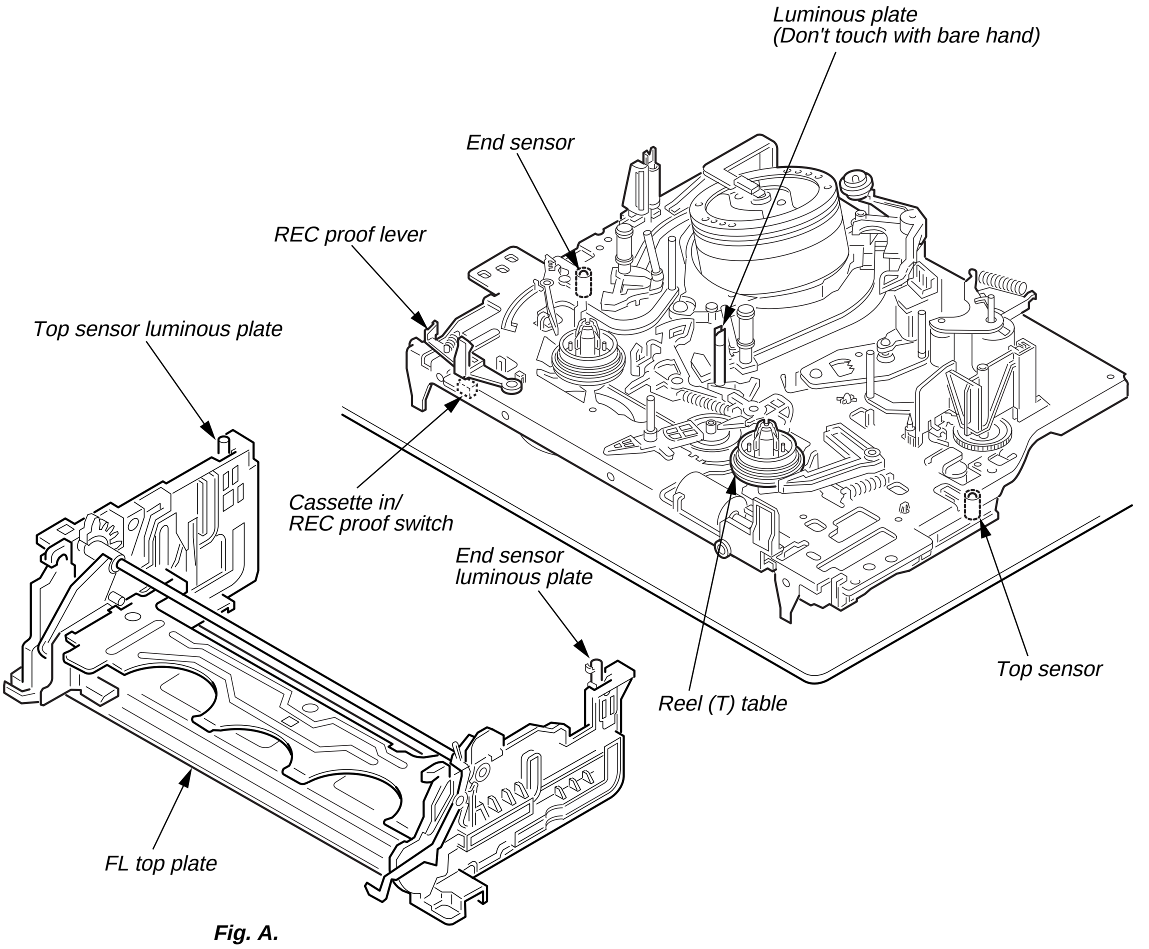

Luminous plate
(Don't touch with bare hand)
End sensor
REC proof lever
Top sensor luminous plate
Cassette in/
REC proof switch
End sensor
luminous plate
Top sensor
Reel (T) table
FL top plate
Fig. A.

*Fig. 1-4*

# 2. PERIODIC CHECK AND REPLACEMENT

In order to obtain the best performance from this unit and make full use of its capabilities, and to extend the life of the unit and tapes, it is recommended that the following periodic checks and maintenance be performed.

* The following must be done after every repair regardless of how many hours the user has operated the machine.

## 2-1. CLEANING OF ROTATING HEAD DISK ASSEMBLY

1) Press a chamois cloth (Jig Ref. No. J-4) which has been dipped in cleaning fluid (Jig Ref. No. J-3) lightly against the rotating drum assembly, then do the cleaning by slowly rotating the rotating head disk by the hand. (Never try to clean by using the motor to turn it.)
2) Never try to clean by moving the chamois cloth at a vertical angle to the head tip. There is a very great danger of damaging the head tip if this is done.

## 2-2. CLEANING OF THE TAPE MOVEMENT SYSTEM

1) Clean the surfaces which the tape contacts during its movement (tape guide, drum assembly surface, capstan, pinch roller, etc.) with a chamois cloth that has been dipped in cleaning fluid.

## 2-3. CLEANING THE DRIVE SYSTEM

1) Clean the driving parts with a cloth that has been dipped in cleaning fluid.

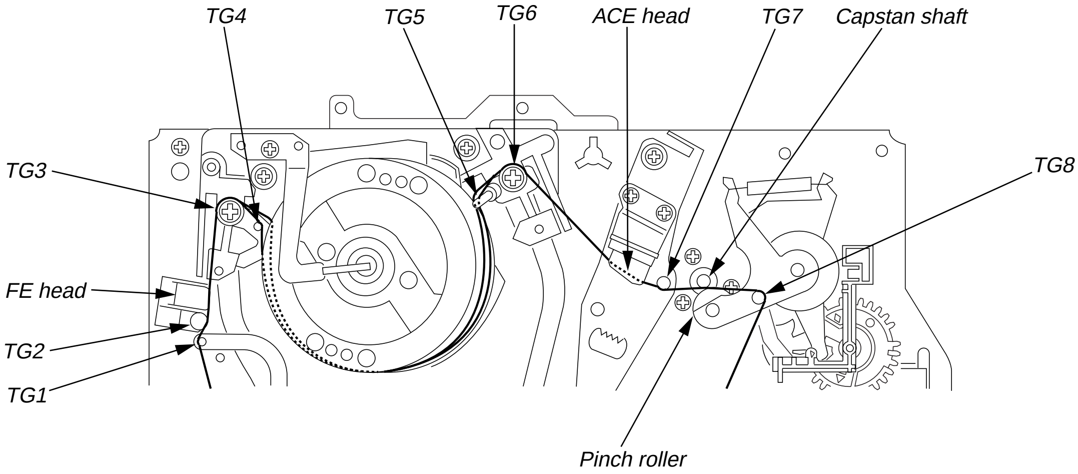


*Fig. 2-1 Parts requiring cleaning*

## 2-4. PERIODIC CHECK ITEMS

Perform the maintenance and check listed on the table below, according to users' operating hours.

| Maintenance & Check | Operating Hours (H) | 500 | 1,000 | 1,500 | 2,000 | 2,500 | 3,000 | 3,500 | 4,000 | 4,500 | 5,000 | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Tape Transportation System | Cleaning of tape transportation system | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | This cleaning must be done whenever a repair is made. |
|  | Cleaning and degaussing of ACE assembly | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |  |
|  | Cleaning and degaussing of upper drum assembly | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | The life of the head varies, depending on operational conditions and method. |
| Performance Confirmation | Abnormal sound | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | Adjust or replace the section which causes abnormal sound. |
|  | Measurement of FWD back tension | — | ☆ | — | ☆ | — | ☆ | — | ☆ | — | ☆ | Confirmation must be made according to 4-1-1.<br>Specified value :<br>Adjust to 5.0504 to 6.5214mN•m (51.5 to 66.5g•cm) (without TC assembly*) or 3.7755 to 5.0994mN•m (38.5 to 52.0g•cm)(with TC assembly*) |
|  | Confirmation of brake system | — | ☆ | — | ☆ | — | ☆ | — | ☆ | — | ☆ | Confirmation must be made according to section. |
|  | Confirmation of record and playback functions | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | Perform the confirmation whenever repair is made. |
|  | Measurement of forward torque | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | Adjust to 4.9033 to 8.8259mN•m (50 to 90 g•cm) |

○ : Cleaning ☆ : Confirmation

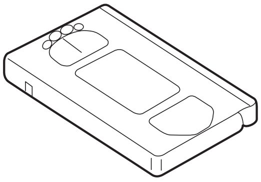
**Note :** On overhaul
When overhauling the unit, replace parts as indicated in the above table.

## 2-5. TOOLS AND FIXTURES REQUIRED FOR SERVICING

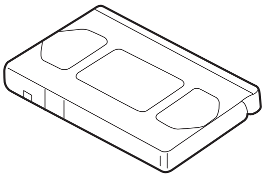
| Ref. No. | Name | | Part No. | Caved Jig No. | Remarks |
|---|---|---|---|---|---|
| J-1 | Torque Measurement Cassette VHT-103S | | J-6090-072-A | | For FWD & back tension torque measurement. |
| | Torque Measurement Cassette VHT-404S | | J-6082-012-A | | For CUE and REVIEW torque measurement. |
| J-2 | Alignment Tape | KRV-52NE* (NTSC) | 8-192-605-41 | | Tape path, Audio azimuth, X-value adjustments |
| | | KRV-51N2 (NTSC) | 8-192-605-32 | | Electrical adjustments, Operation checks |
| | | KRV-52PL (PAL) | 8-192-605-46 | | Tape path, Audio azimuth, X-value adjustments |
| | | KRV-51P (PAL) | 8-192-605-36 | | Electrical adjustments, Operation checks |
| J-3 | Cleaning fluid | | Y-2031-001-0 | — | |
| J-4 | Chamois Leather | | 2-034-697-00 | — | |
| J-5 | Dental Mirror (With Handle)<br>Dental Mirror (Mirror) | | J-6080-029-A<br>J-6080-030-1 | SL-5052 | Tape path and tape traveling adjustments or checks. |
| J-6 | FLOIL SG-646 | | 7-651-000-44 | | Net. 20g |
| J-7 | Diamond Oil NT-68 | | 7-661-018-18 | | |
| J-8 | Screw Lock G (1401B) | | 7-432-114-11 | | |
| J-9 | X-value adjusting driver | | J-6090-073-A | | X-value adjustment |

* Be sure to use KRV-52NE having version number.

J-1

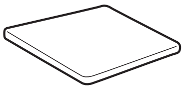


J-2

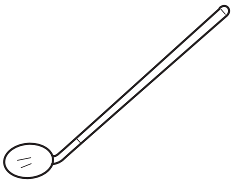


J-3

J-4



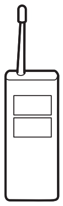
J-5



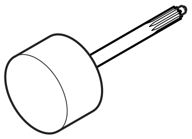
J-6

J-7

J-8



J-9



# 3. MAINLY MECHANICAL PARTS REPLACEMENT

**Notes:**

For the removal of cabinets, printed circuit boards or the like, please refer to the “DISASSEMBLY” section on the service manual of the respective models.
To assemble the mechanical parts which are disassembled in the following sections, perform the disassembly steps in reverse, unless otherwise specified.
When replacing greased parts, grease them in the same way.
Do not oil, grease or touch with bare hands the surfaces that contacts tape of guides and brake shoes.
Install gears to engage each other.
Basically, disassembling and assembling should be done in the unthreading-end condition.

## 3-1. FL COMPLETE ASSEMBLY

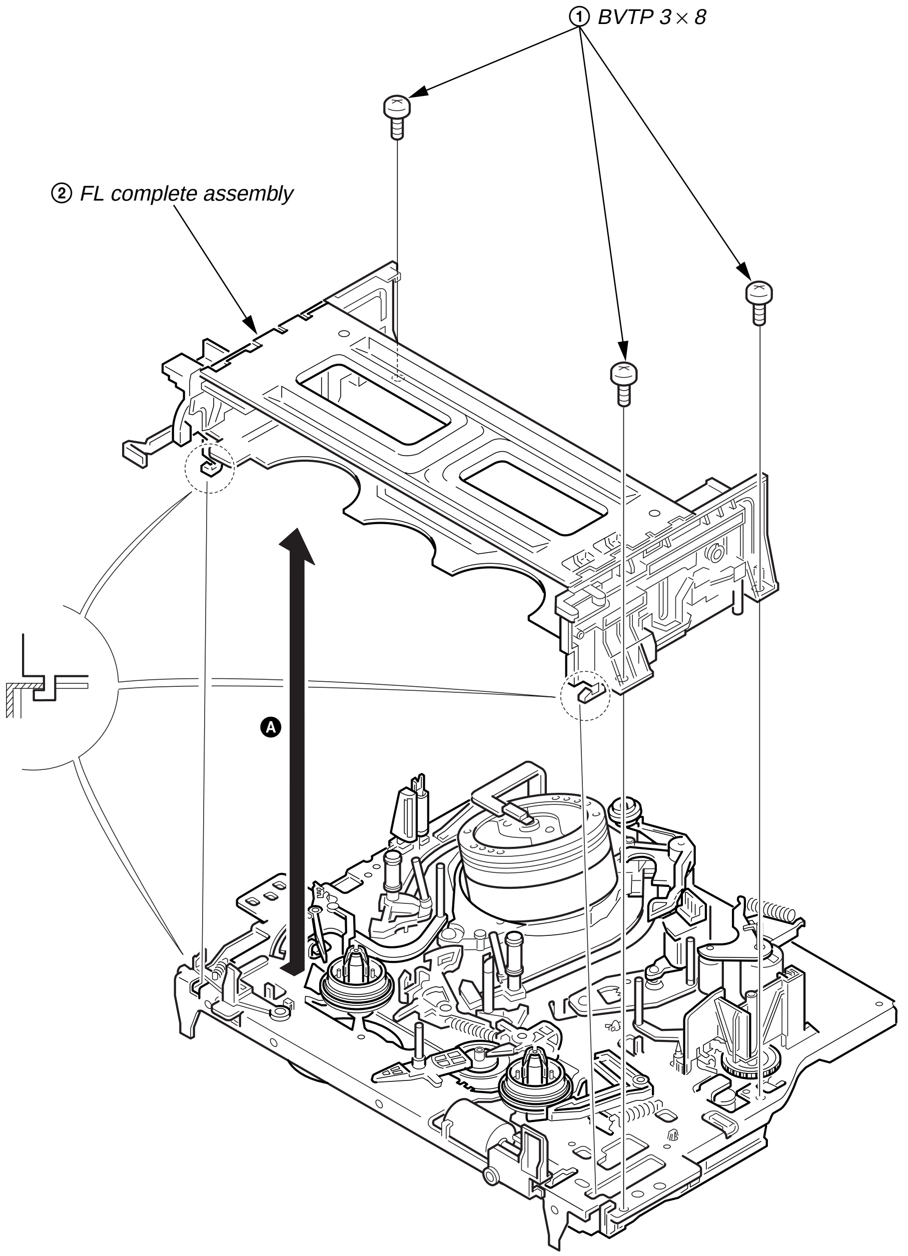
1) Remove screws (BVTP3 × 8) ①.
2) Remove FL complete assembly ② in the arrow Ⓐ direction.

**Note :** Be careful not to damage claws on the bottom and front.

3) Remove torsion spring (deck open) ③.
4) Remove luminous plate (top sensor) ④ and luminous plate (end sensor) ⑤.

**[Note on Mounting]**

- When mounting FL complete assembly, first insert claws on the bottom and front not to damage.
- Keep clean top sensor and end sensor luminous plates.



Screw tightening torque
① : 0.7845 ± 0.0784N•m (8.0 ± 0.8kg•cm)

Fig. 3-1

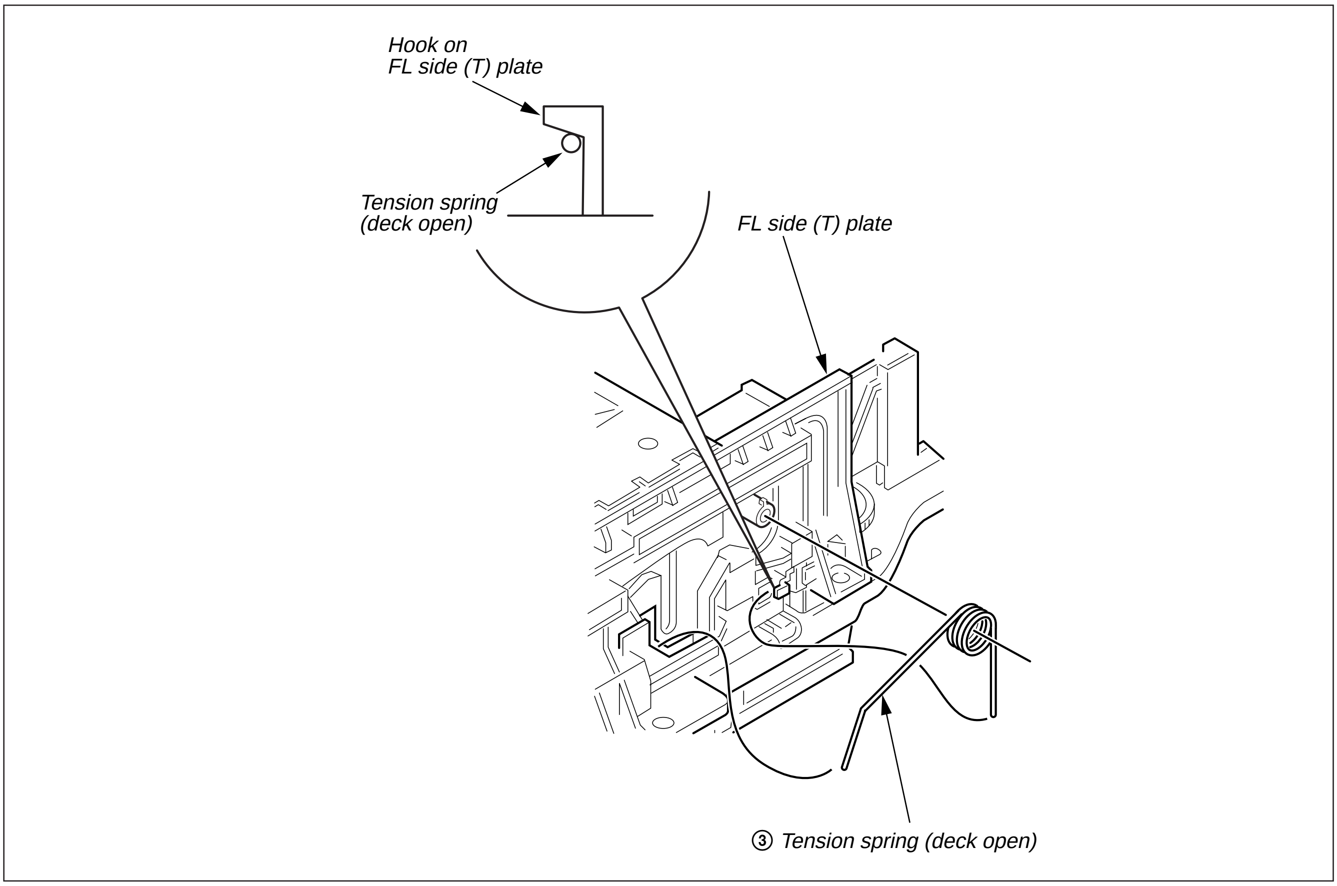

Hook on
FL side (T) plate
Tension spring
(deck open)
FL side (T) plate
③ Tension spring (deck open)

Fig. 3-2

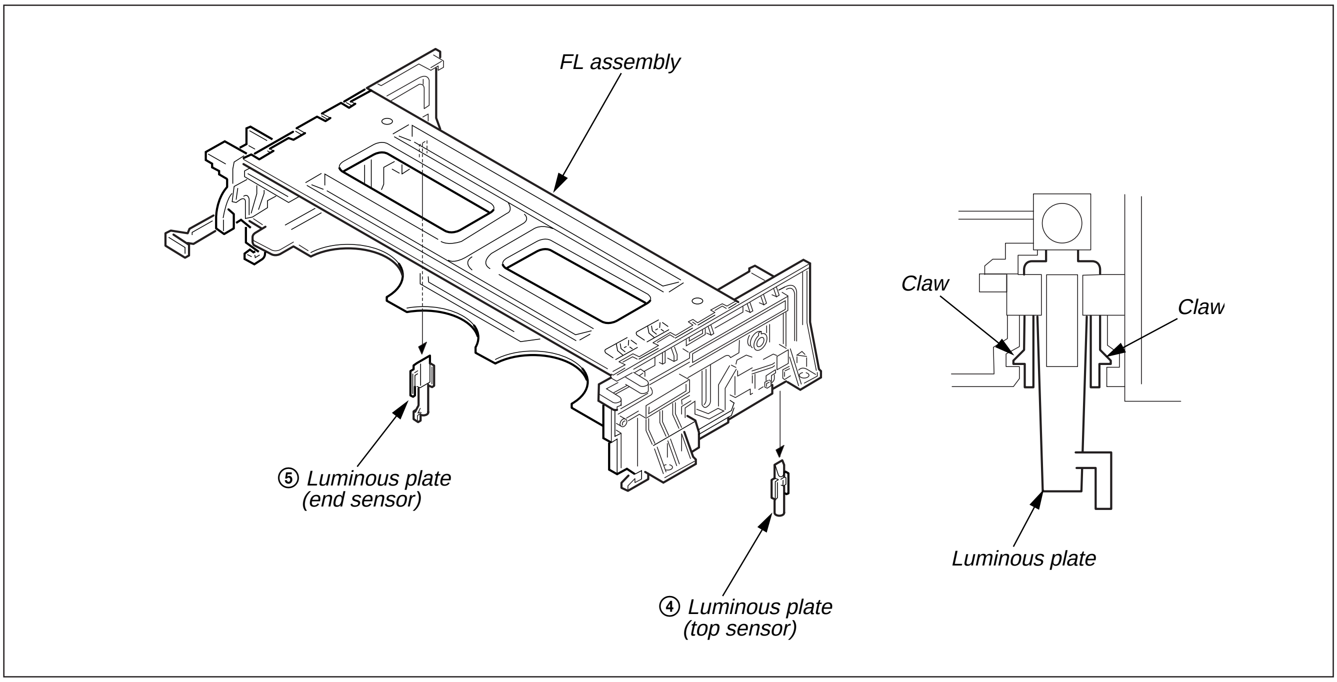

FL assembly
Claw
Claw
⑤ Luminous plate
(end sensor)
Luminous plate
④ Luminous plate
(top sensor)

Fig. 3-3

## 3-2. DRUM ASSEMBLY

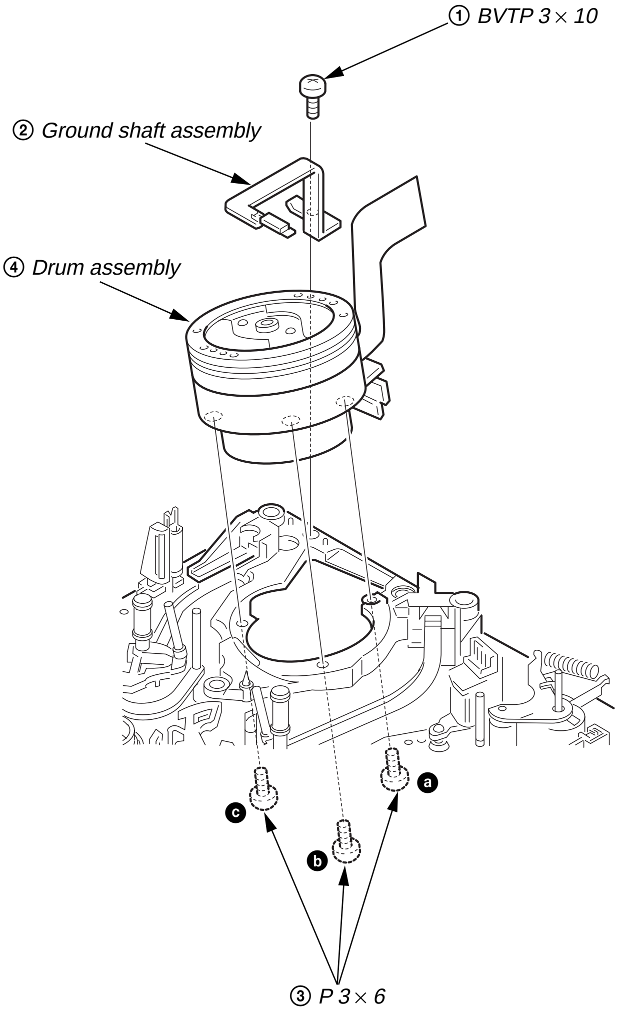
1) Remove screw (BVTP3 × 8) ①.
2) Remove ground shaft assembly ② not to touch its tip with bare hand.
3) Remove screws ③ to remove drum assembly ④.

### [Notes on Mounting]

- Don’t touch head chips and tip of ground shaft assembly with bare hand.
- Keep clean the surface that contacts tape of drum assembly.
- Tighten screw ③ in the order ⓐⓑⓒ

### [Adjusting after Mounting]

- 4-1. Tape path adjustment


① BVTP 3 × 10
② Ground shaft assembly
④ Drum assembly
ⓐ
ⓒ
ⓑ
③ P 3 × 6

Screw tightening torque
①, ③ : 0.4413 ± 0.0490N•m (4.5 ± 0.5kg•cm)

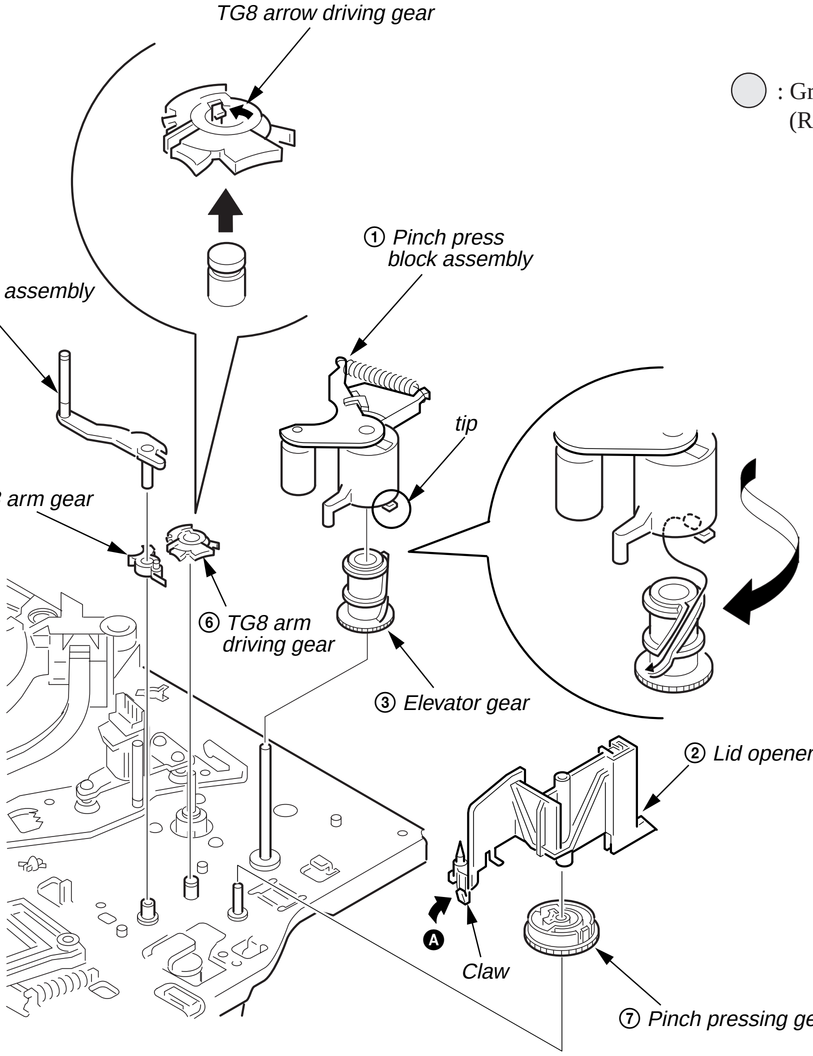
Fig. 3-4

## 3-3. PINCH PRESS BLOCK ASSEMBLY, TG8 ASSEMBLY AND THEIR PERIPHERY

1) Remove pinch press block assembly ① while releasing its tip from the claw of lid opener ②.
2) Remove lid opener ② while releasing claw in the arrow Ⓐ direction from mechanical chassis.
3) Remove elevator gear ③.
4) Remove TG8 assembly ④, TG8 arm gear ⑤ and TG8 arm driving gear ⑥.
5) Then remove pinch pressing gear ⑦.

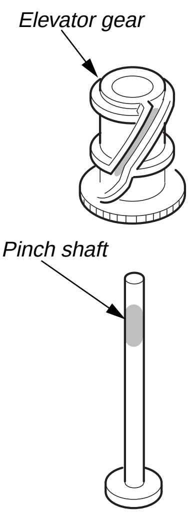
**[Notes on Mounting]**

- When attaching pinch pressing gear ⑦ and elevator gear ③, be sure to adjust their phases as shown in Fig. A.
- Apply grease to elevator gear ⑦ and pinch shaft as shown in Fig. B.
- Don’t touch surface of pinch roller with bare hand.


TG8 arrow driving gear
① Pinch press block assembly
④ TG8 assembly
tip
⑤ TG8 arm gear
⑥ TG8 arm driving gear
③ Elevator gear
② Lid opener
Ⓐ
Claw
⑦ Pinch pressing gear

○ : Grease SG-646
(Ref. No. J-6) Coating portions

**Fig. B.**


Elevator gear
Pinch shaft

***[Phase adjustment]***

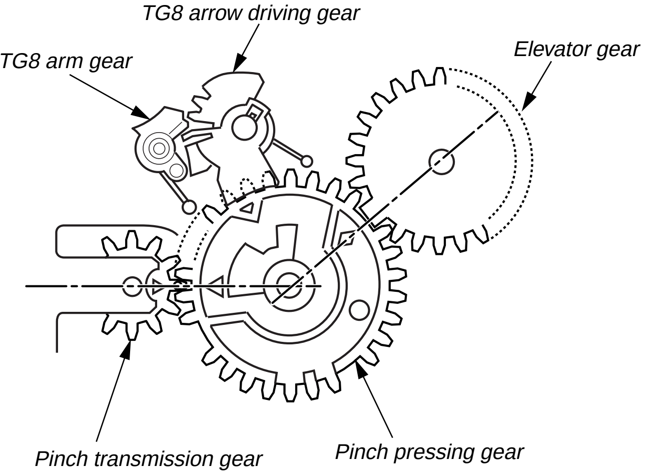

TG8 arrow driving gear
TG8 arm gear
Elevator gear
Pinch transmission gear
Pinch pressing gear

**Fig. A.**

*Fig. 3-5*

## 3-4. RUBBER BELT, CAPSTAN MOTOR

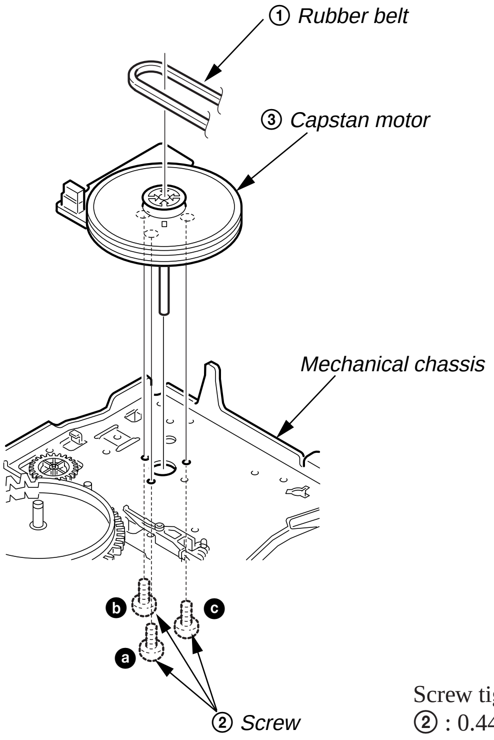
1) Remove rubber belt ①.
2) Remove screws ② to pull out capstan motor ③.

**[Notes on Mounting]**

- Attach rubber belt not to twist it.
- Don't touch capstan motor with bare hand to keep clean capstan motor.
- Tighten screws ② in the order ⓐⓑⓒ

**[Adjustment after Mounting]**

- 4-1. Tape path adjustment.


① Rubber belt
③ Capstan motor
Mechanical chassis
ⓑ
ⓒ
ⓐ
② Screw

Screw tightening torque
② : 0.4413 ± 0.0490N•m (4.5 ± 0.5kg•cm)

Fig. 3-6

## 3-5. ACE HEAD BLOCK ASSEMBLY

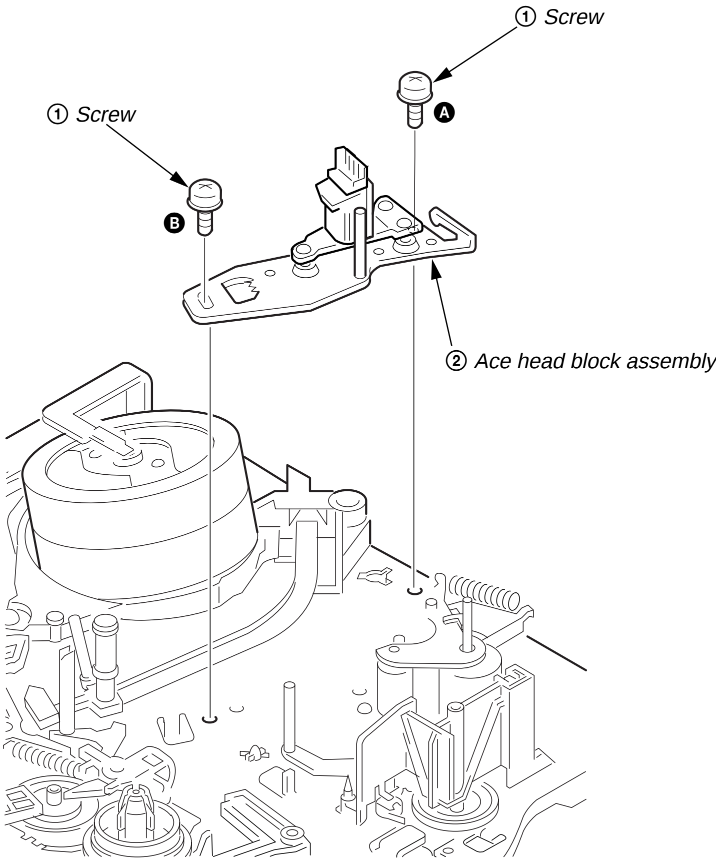
1) Remove screws ① to remove ACE head block assembly ②.

**[Notes on Mounting]**

- Don’t touch capstan motor with bare hand to keep clean capstan motor.
- On tightening screws ①, first, tighten in the order 🅐 🅑 next loosen 🅑180 degrees or more and perform adjustments. After adjustments tighten with torque screwdriver (torque; 0.29 ± 0.29 N•m (3.0 ± 0.3kg•cm)).

**[Adjustment after Mounting]**

- 4-1. Tape path adjustment.



Screw tightening torque
① : 0.7845 ± 0.0784N•m (8.0 ± 0.8kg•cm)

*Fig. 3-7*

## 3-6. FEH ASSEMBLY

1) While putting the boss out from mechanical chassis, turn FEH assembly ① in the arrow Ⓐ direction and pull out FEH assembly above.
2) Slide FE head ② out from FEH holder not to break claw (Recorder only).
3) Remove TG2 shaft ③ by pushing with a screwdriver covered with cloth or the like not to scratch the surface.

**[Note on Mounting]**

- Don't touch FE head and TG2 shaft with bare hand.

**[Adjustment after Mounting]**

- 4-1. Tape path adjustment.

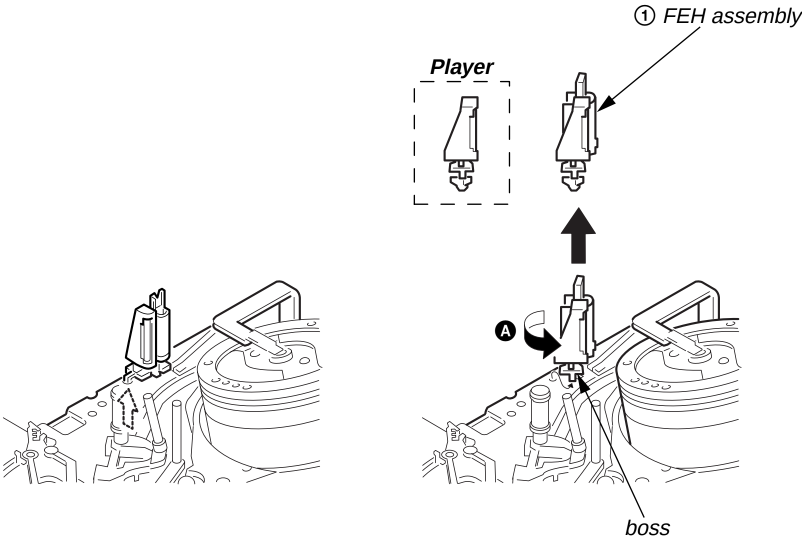

① FEH assembly
Player
Ⓐ
boss

Fig. 3-8

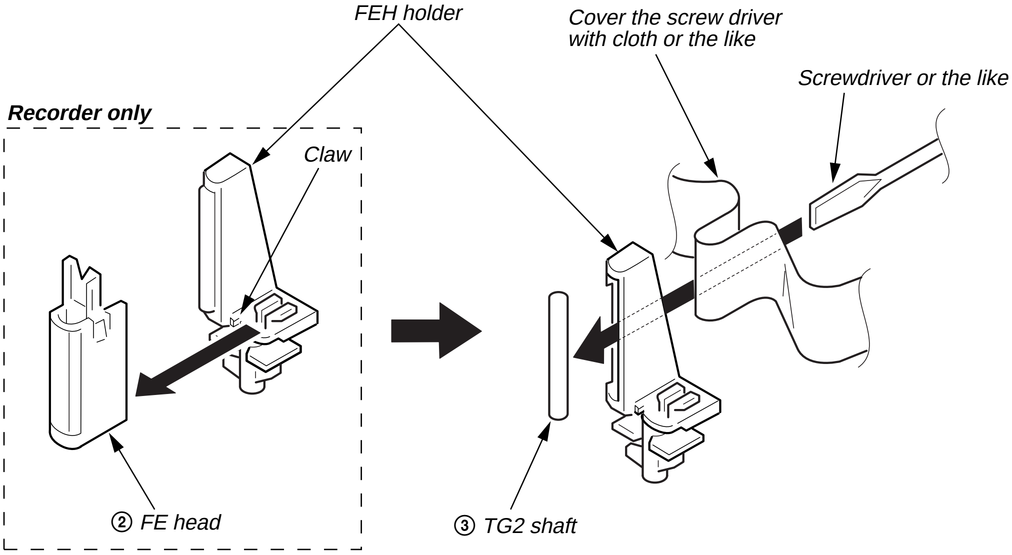

FEH holder
Cover the screw driver with cloth or the like
Screwdriver or the like
Recorder only
Claw
② FE head
③ TG2 shaft

Fig. 3-9

## 3-7. REC PROOF LEVER

1) Remove FL complete assembly. (Refer to 3-1.)
2) Remove tension spring (REC proof) ①.
3) Remove REC proof lever ② in the arrow Ⓑby pushing claw in the arrow Ⓐdirection.

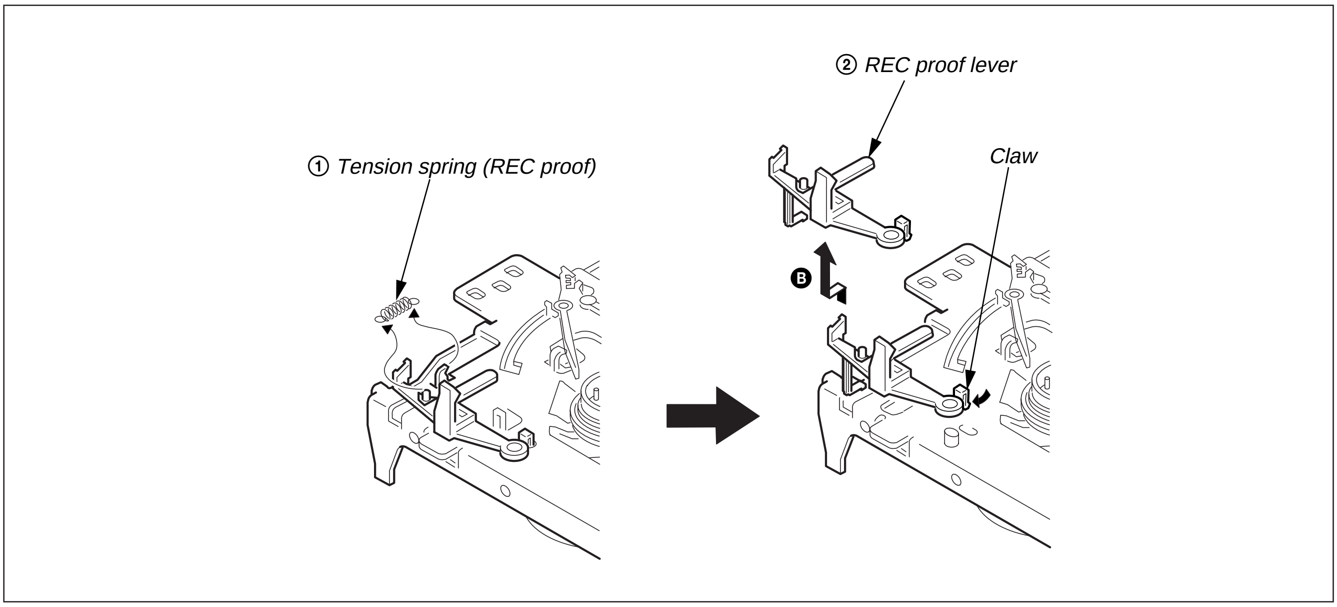

② REC proof lever
① Tension spring (REC proof)
Claw
B

Fig. 3-10

## 3-8. RVS BRAKE ARM ASSEMBLY

1) Remove FL complete assembly. (Refer to 3-1.)
2) Remove extension spring (RVS brake) ①.
3) Turn RVS brake arm assembly ② in the arrow Ⓐdirection and remove it in the arrow Ⓑ

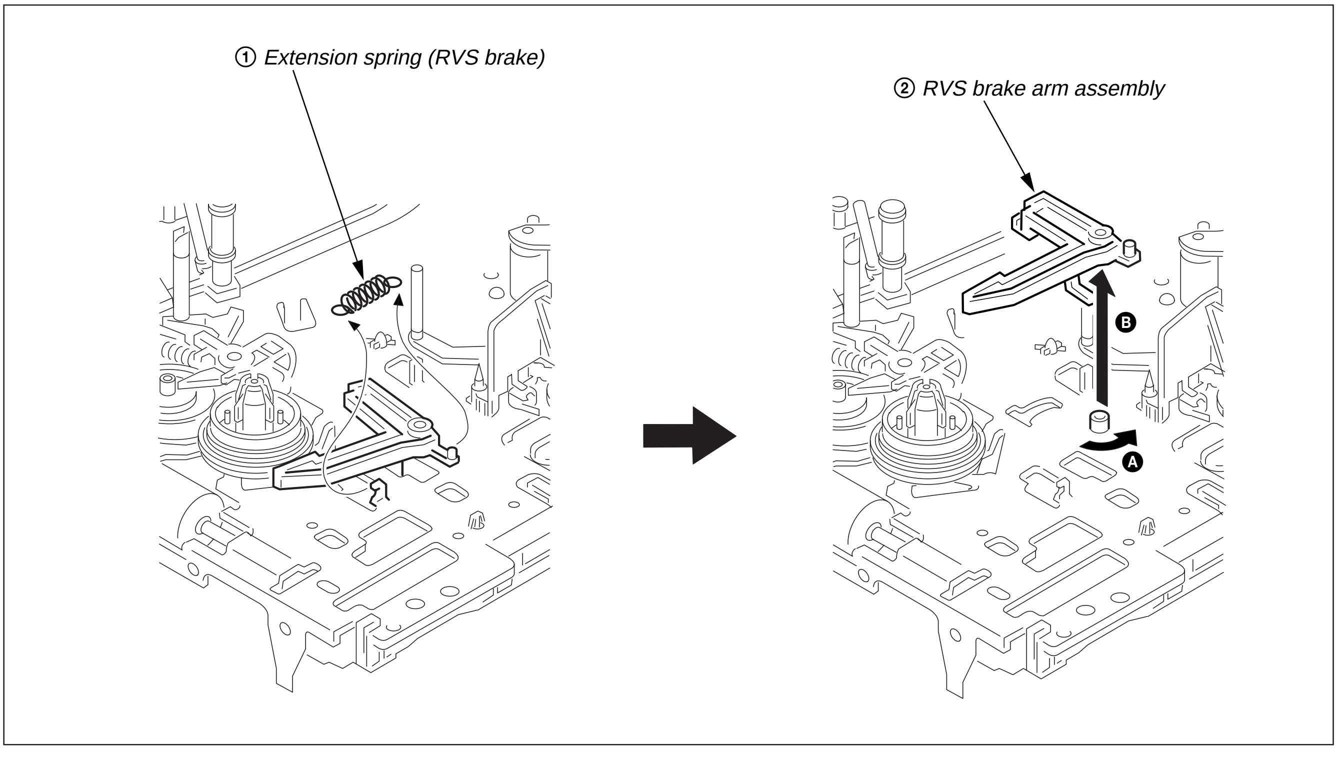
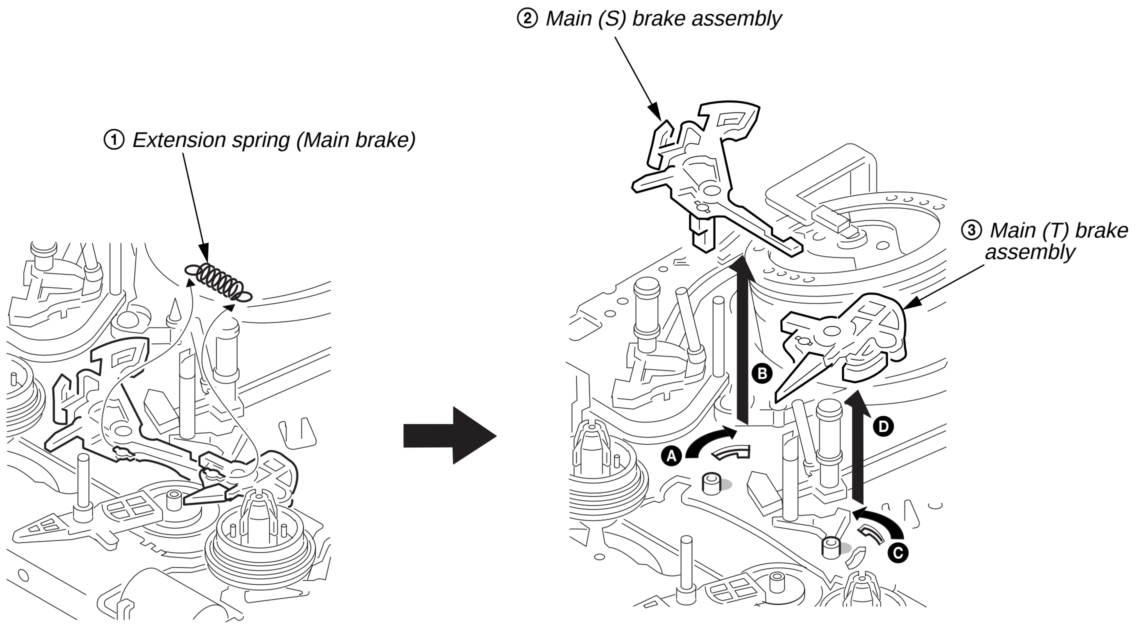

① Extension spring (RVS brake)
② RVS brake arm assembly
B
A

Fig. 3-11

## 3-9. MAIN (S) AND MAIN (T) BRAKE ASSEMBLIES

1) Remove FL complete assembly. (Refer to 3-1.)
2) Remove extension spring (main brake) ①.
3) Turn main (S) brake assembly ② in the arrow 🅐direction and remove it in the arrow 🅑
4) Turn main (T) brake assembly ③ in the arrow 🅒direction and remove it in the arrow 🅓


② Main (S) brake assembly
① Extension spring (Main brake)
③ Main (T) brake assembly
🅑
🅓
🅐
🅒

○ : Grease SG-646
(Ref. No. J-6) Coating portions

*Fig. 3-12*

### 3-10. REEL (T) TABLE (BLACK)

1) Remove FL complete assembly. (Refer to 3-1.)
2) Remove stopper washer ① to pull reel (T) table ② out.
3) Remove thrust washer ③.

**[Note on Mounting]**

- Before attaching, confirm the oil is applied at the top of reel (T) shaft.

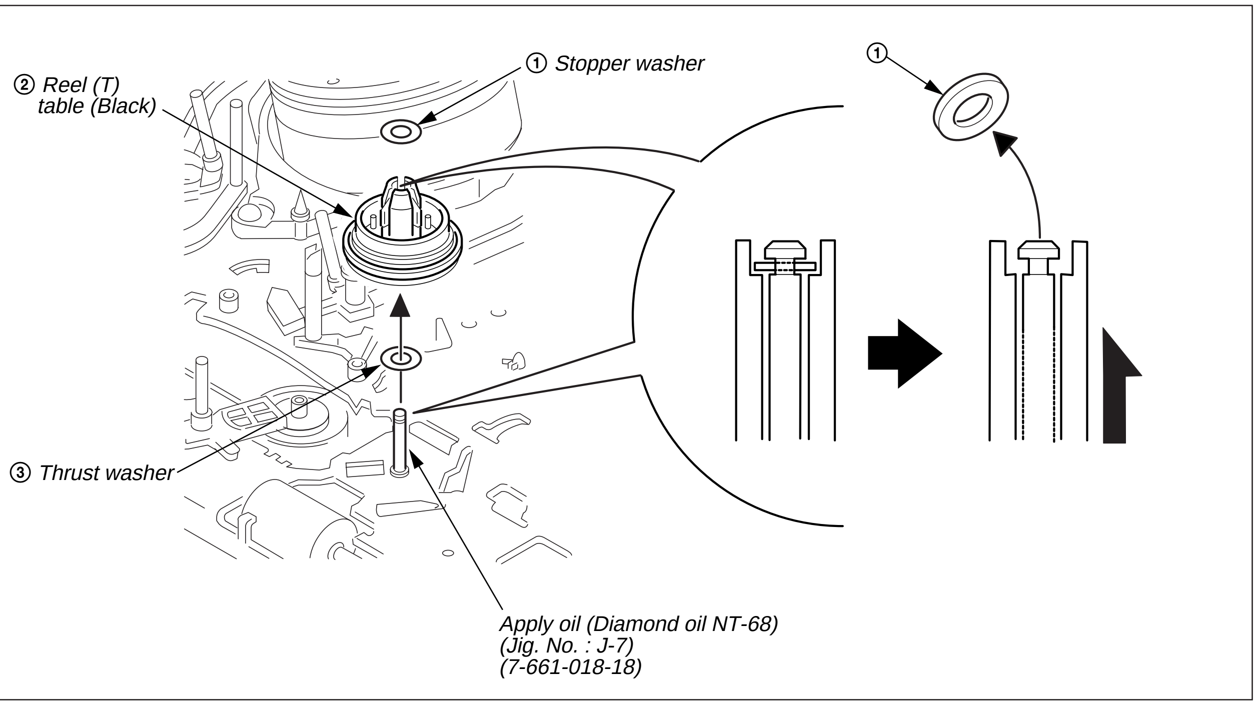

① Stopper washer
② Reel (T) table (Black)
③ Thrust washer
①
Apply oil (Diamond oil NT-68) (Jig. No. : J-7) (7-661-018-18)

Fig. 3-13

## 3-11. PENDULUM ARM ASSEMBLY

1) Remove FL complete assembly. (Refer to 3-1.)
2) Remove main (S) and main (T) brake assemblies. (Refer to 3-10.)
3) While releasing claws from the pendulum arm shaft in the arrow A direction, pull out pendulum arm assembly ①.

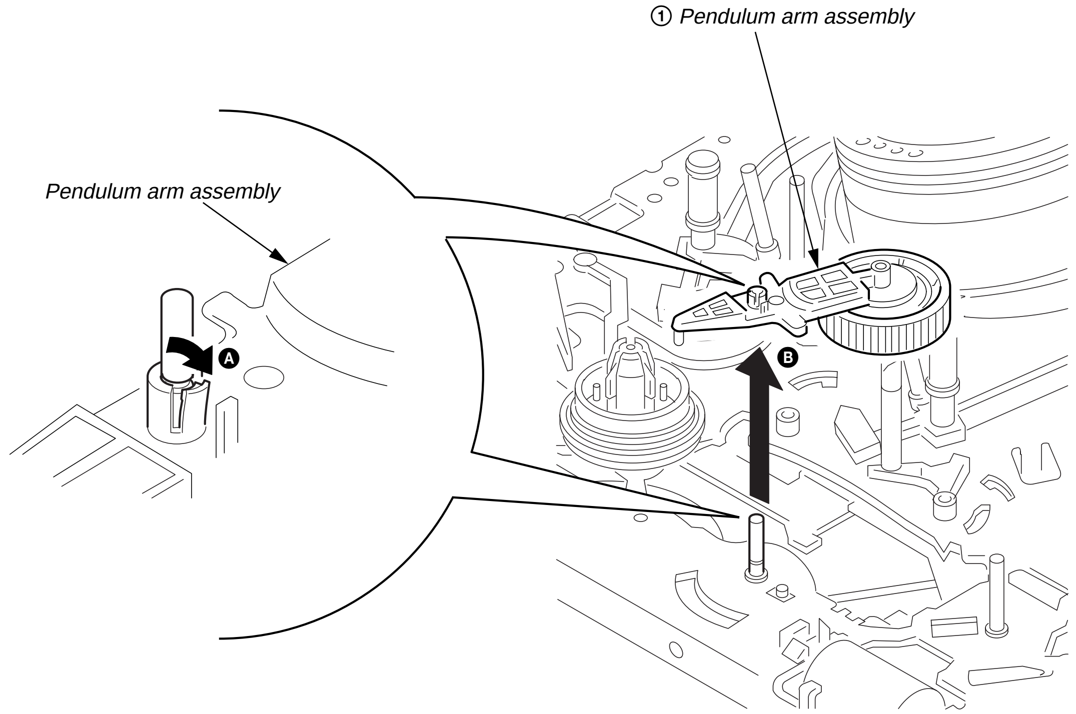

① Pendulum arm assembly
Pendulum arm assembly
A
B

*Fig. 3-14*

### 3-12. FL SLIDER BLOCK ASSEMBLY

1) Remove FL complete assembly. (Refer to 3-1.)
2) Set the mechanism deck upside down.
3) Remove a screw (BVTP 3 × 8) ① and then retainer plate ② is getting out of place.
4) Slide FL slider block assembly ③ off in the arrow 🅐 direction and raise it up.

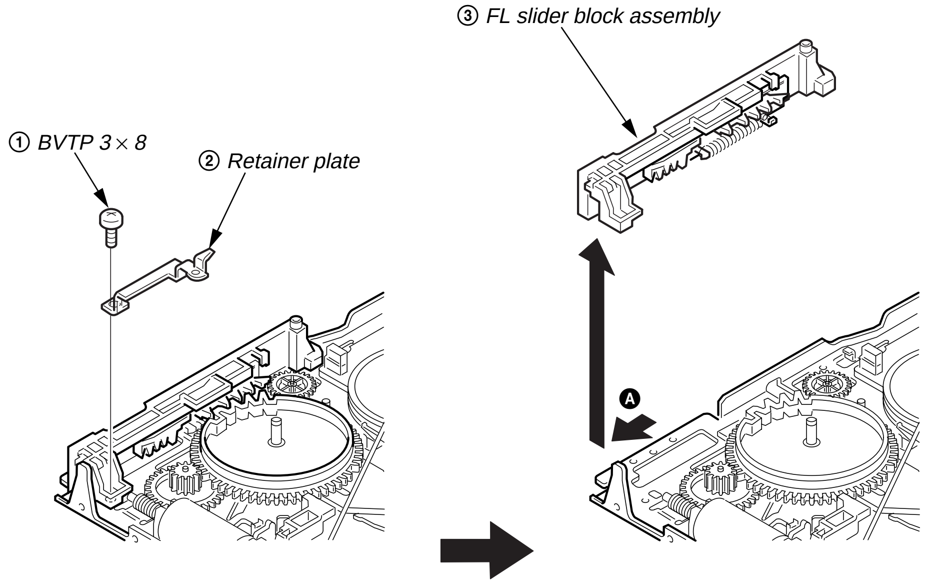
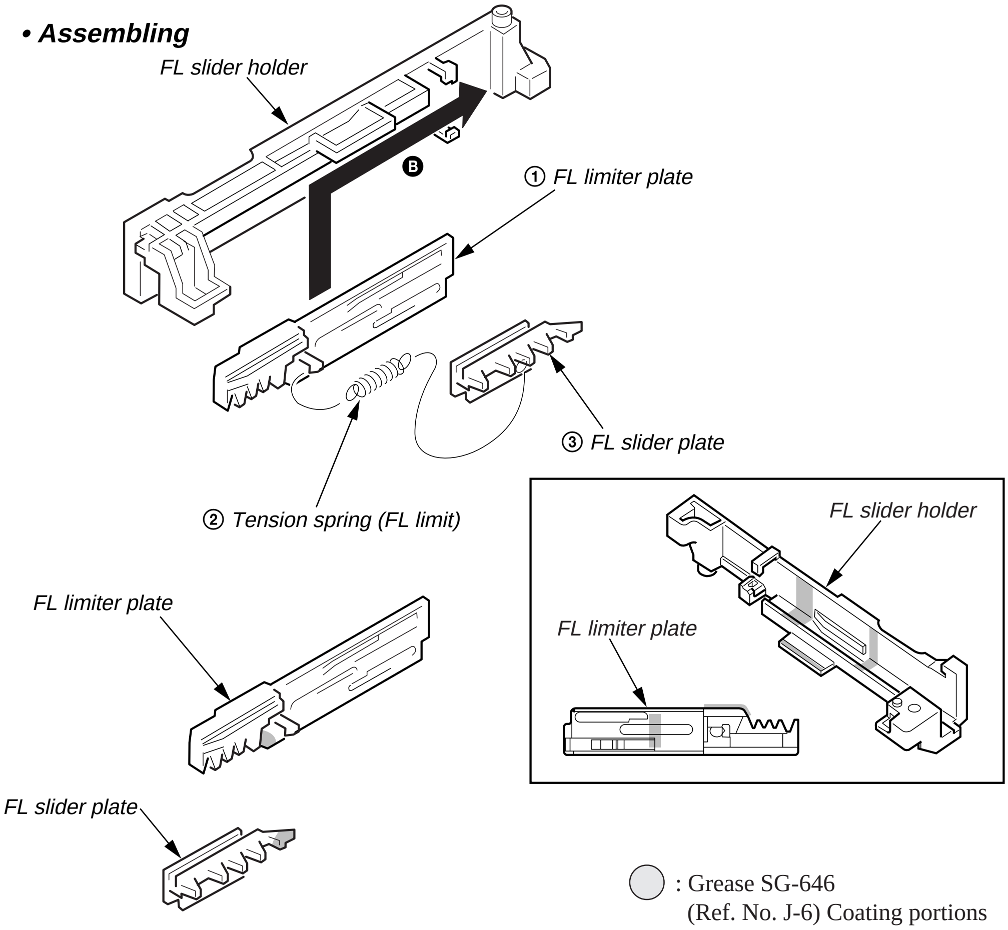

③ FL slider block assembly
① BVTP 3 × 8
② Retainer plate
🅐

Fig. 3-15


• Assembling
FL slider holder
🅑
① FL limiter plate
③ FL slider plate
② Tension spring (FL limit)
FL slider holder
FL limiter plate
FL limiter plate
FL slider plate

○ : Grease SG-646
(Ref. No. J-6) Coating portions

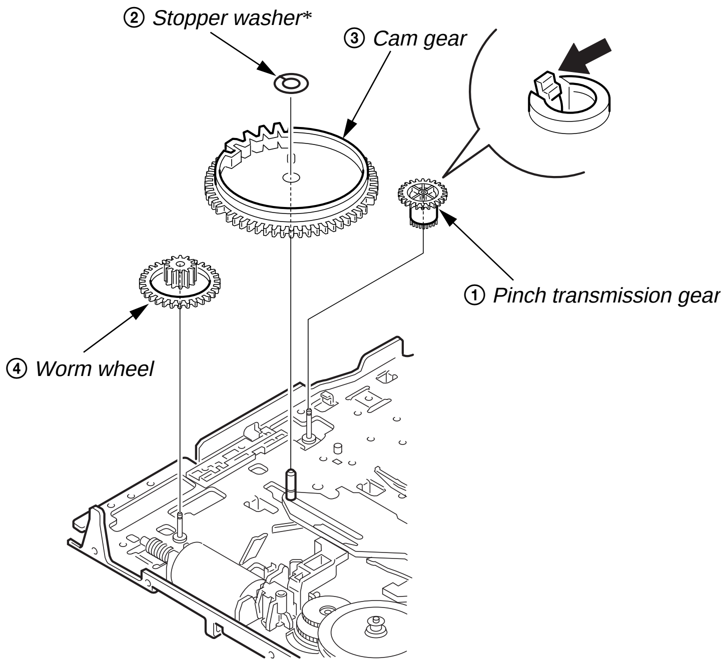
Fig. 3-16

## 3-13. PINCH TRANSMISSION GEAR, CAM GEAR, WORM WHEEL

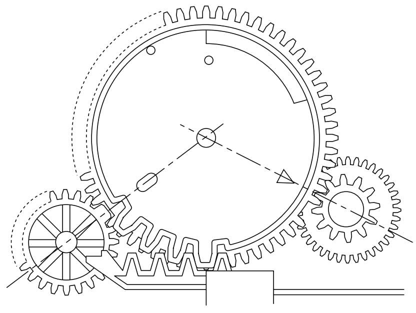
1) Remove FL complete assembly. (Refer to 3-1.)
2) Remove FL slider block assembly. (Refer to 3-13.)
3) Remove pinch transmission gear ① by putting off its claw from shaft.
4) Remove stopper washer ②* to pull out cam gear ③.
5) Remove worm wheel ③ by putting off its claw from shaft.

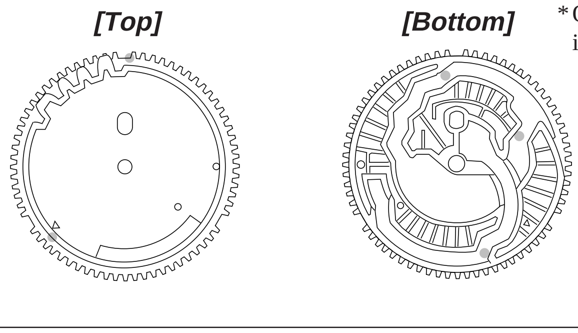
**[Note on Mounting]**

- Before attaching cam gear ③, confirm that the specified locations are coated with grease SG-646 (Ref. No. J-6).
- Adjust the phase of gears each other.



***• Phase adjustment***




***[Top]*** ***[Bottom]***

○ : Grease SG-646
(Ref. No. J-6) Coating portions

* Once remove stopper washer ②, don’t use it again. Replace it with new one.

*Fig. 3-17*

## 3-14. CAPSTAN BRAKE ASSEMBLY, CAPSTAN BRAKE SHAFT

1) Remove rubber belt. (Refer to 3-5.)
2) Remove cap brake spring ①.
3) Remove capstan brake assembly ② by putting off claw of capstan brake shaft ③.
4) Set the mechanical chassis bottom side down.
5) While pushing the boss of capstan brake shaft ③, turn it clockwise to remove it.

**[Note on Mounting]**

- Don’t touch shoe of capstan brake assembly with bare hand.

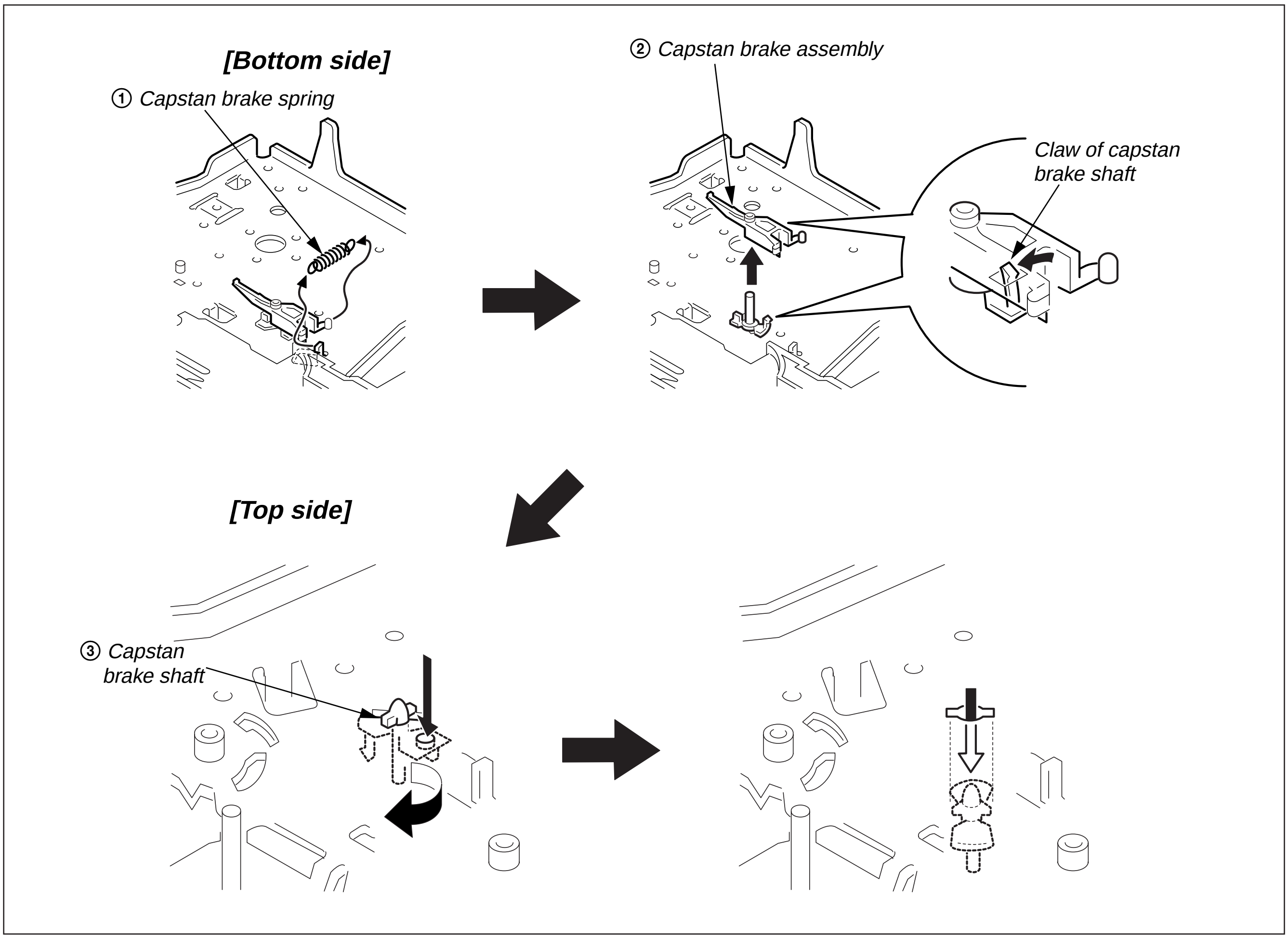

[Bottom side]
① Capstan brake spring
② Capstan brake assembly
Claw of capstan brake shaft
[Top side]
③ Capstan brake shaft

Fig. 3-18

## 3-15. FL SLIDER GUIDE

1) Remove FL complete assembly. (Refer to 3-1.)
2) Remove FL slider block assembly. (Refer to 3-13.)
3) Remove FL slider guide ① while pushing claws in the arrow Ⓐ direction.

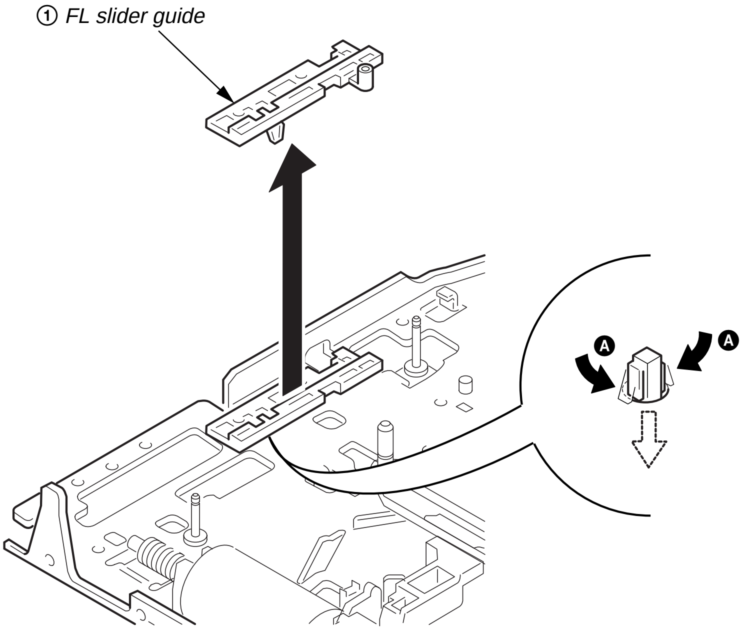


*Fig. 3-19*

## 3-16. SLIDER

1) Remove FL complete assembly. (Refer to 3-1.)
2) Remove rubber belt. (Refer to 3-5.)
3) Remove FL slider block assembly. (Refer to 3-13.)
4) Remove cam gear. (Refer to 3-14.)
5) Remove stopper washers ① and remove slider ② in the arrow direction.

**[Note on Mounting]**

- Before attaching slider ②, confirm the specified locations are coated with grease SG-646 (Ref. No. J-6).
- When attaching slider ②, adjust "∆" mark on slider to loading gear (T) shaft as shown in Fig. A.

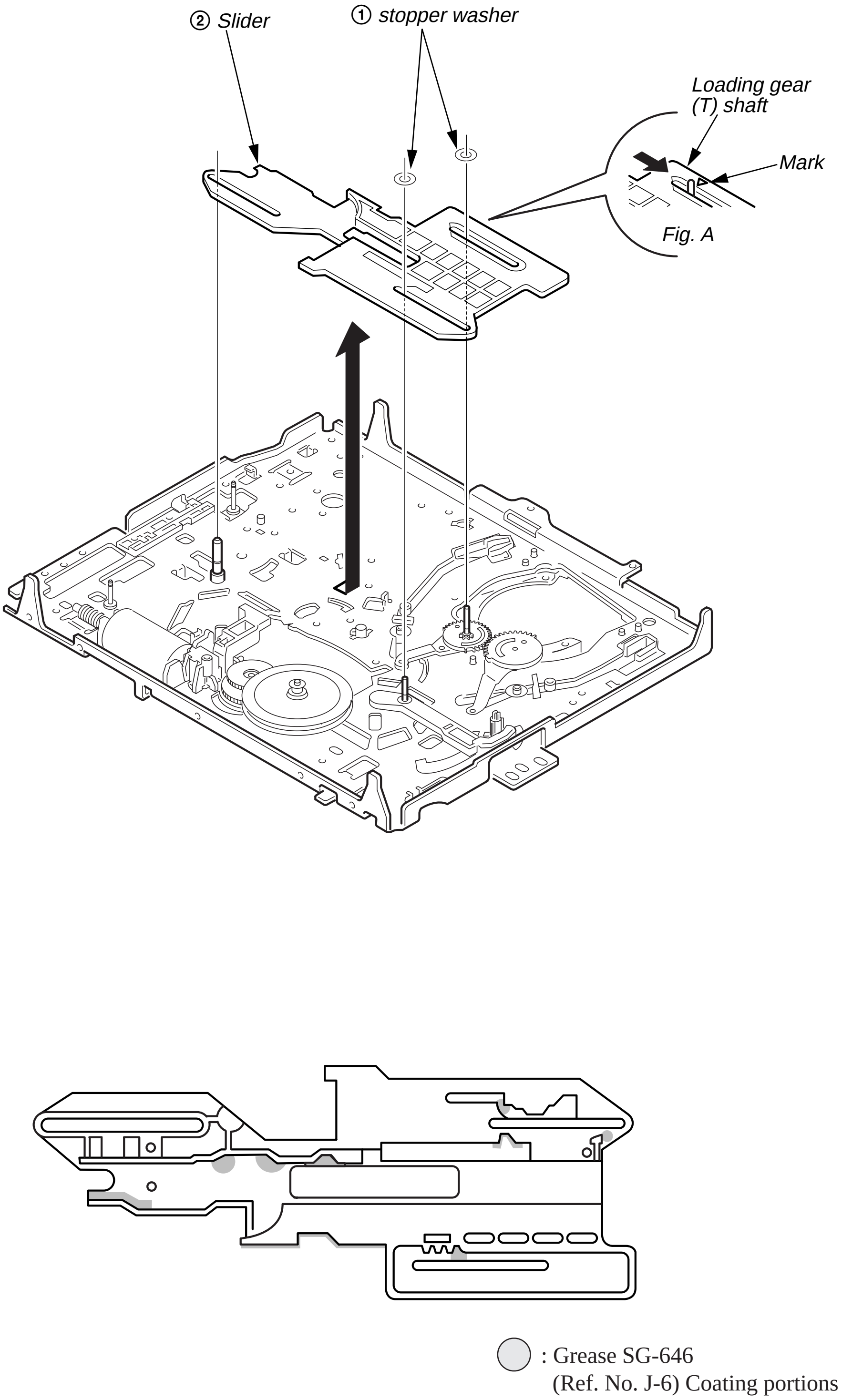

② Slider
① stopper washer
Loading gear (T) shaft
Mark
Fig. A
: Grease SG-646 (Ref. No. J-6) Coating portions

*Fig. 3-20*

## 3-17. TG1 DRIVING ARM

1) Remove FL complete assembly. (Refer to 3-1.)
2) Remove rubber belt. (Refer to 3-5.)
3) Remove FL slider block assembly. (Refer to 3-13.)
4) Remove cam gear. (Refer to 3-14.)
5) Remove slider. (Refer to 3-17.)
6) Remove spring (power tension) ① from TG1 driving arm ②.
7) Remove TG1 driving arm ② by turning it in the arrow 🅐to 🅑direction.

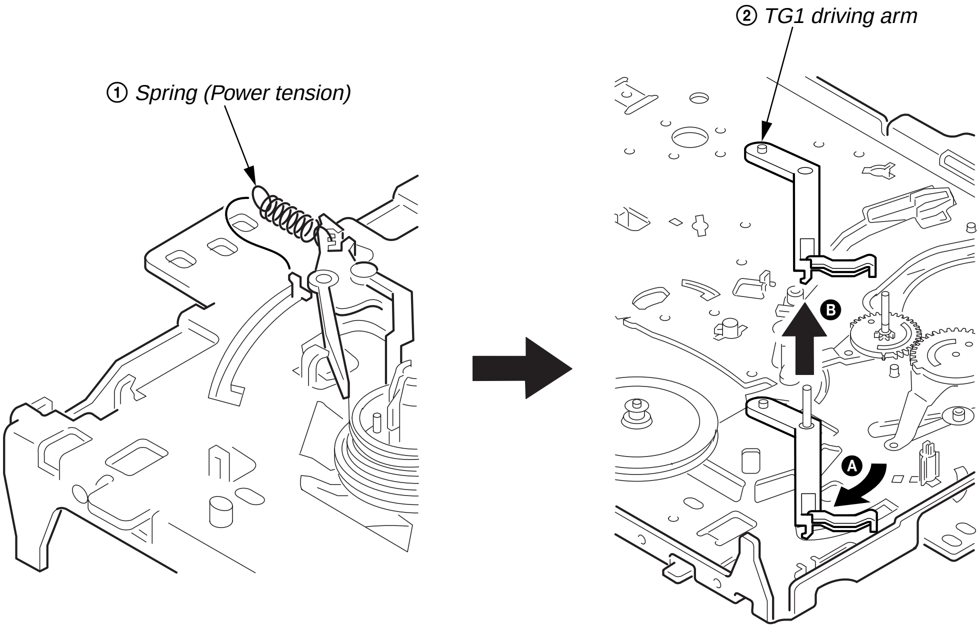

② TG1 driving arm
① Spring (Power tension)
🅑
🅐

Fig. 3-21

## 3-18. LOADING (T) AND LOADING (S) GEAR ASSEMBLIES

1) Remove FL complete assembly. (Refer to 3-1.)
2) Remove rubber belt. (Refer to 3-5.)
3) Remove FL slider block assembly. (Refer to 3-13.)
4) Remove cam gear. (Refer to 3-14.)
5) Remove slider. (Refer to 3-17.)
6) Remove loading (T) gear assembly ① and loading (S) gear assembly ② in the arrow direction.

**[Note on Mounting]**

- When attaching them, be sure to adjust the phase each other.

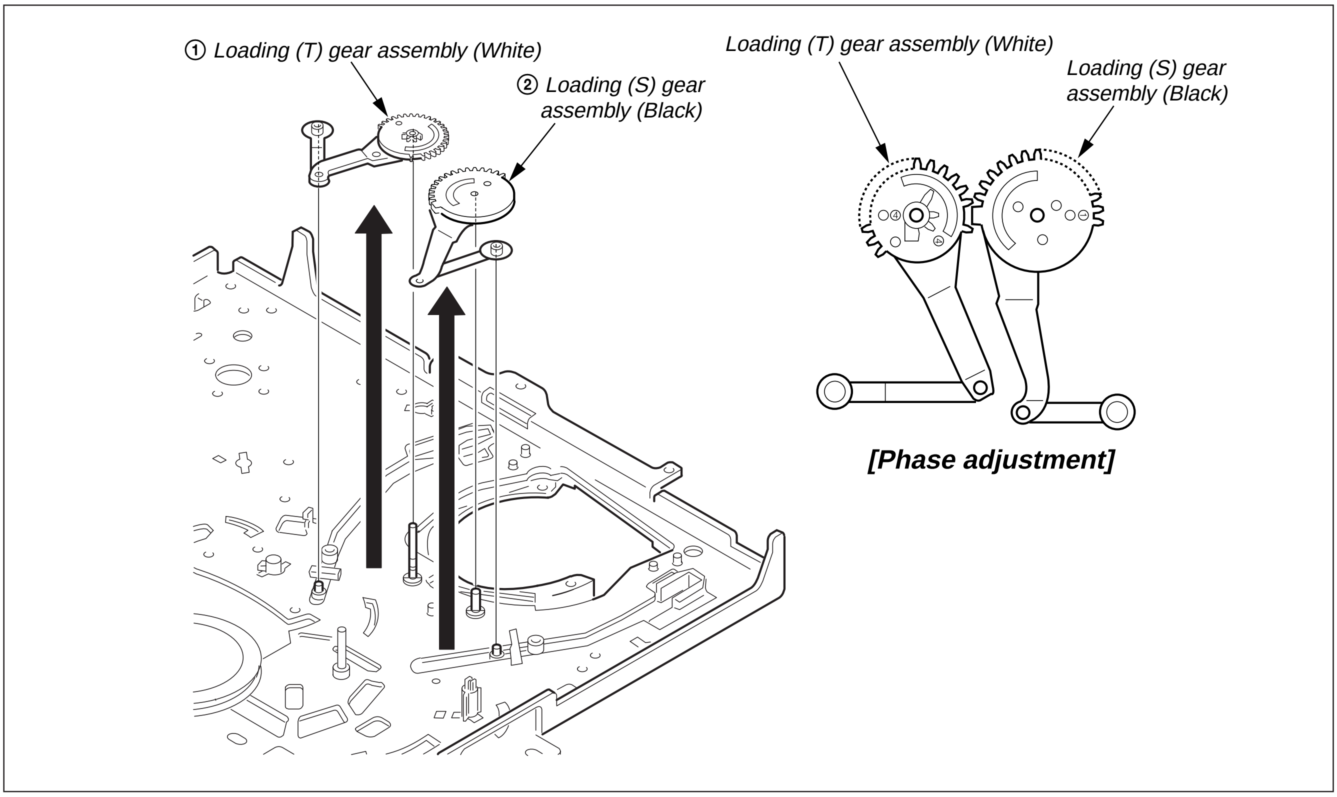

① Loading (T) gear assembly (White)
② Loading (S) gear assembly (Black)
Loading (T) gear assembly (White)
Loading (S) gear assembly (Black)
[Phase adjustment]

Fig. 3-22

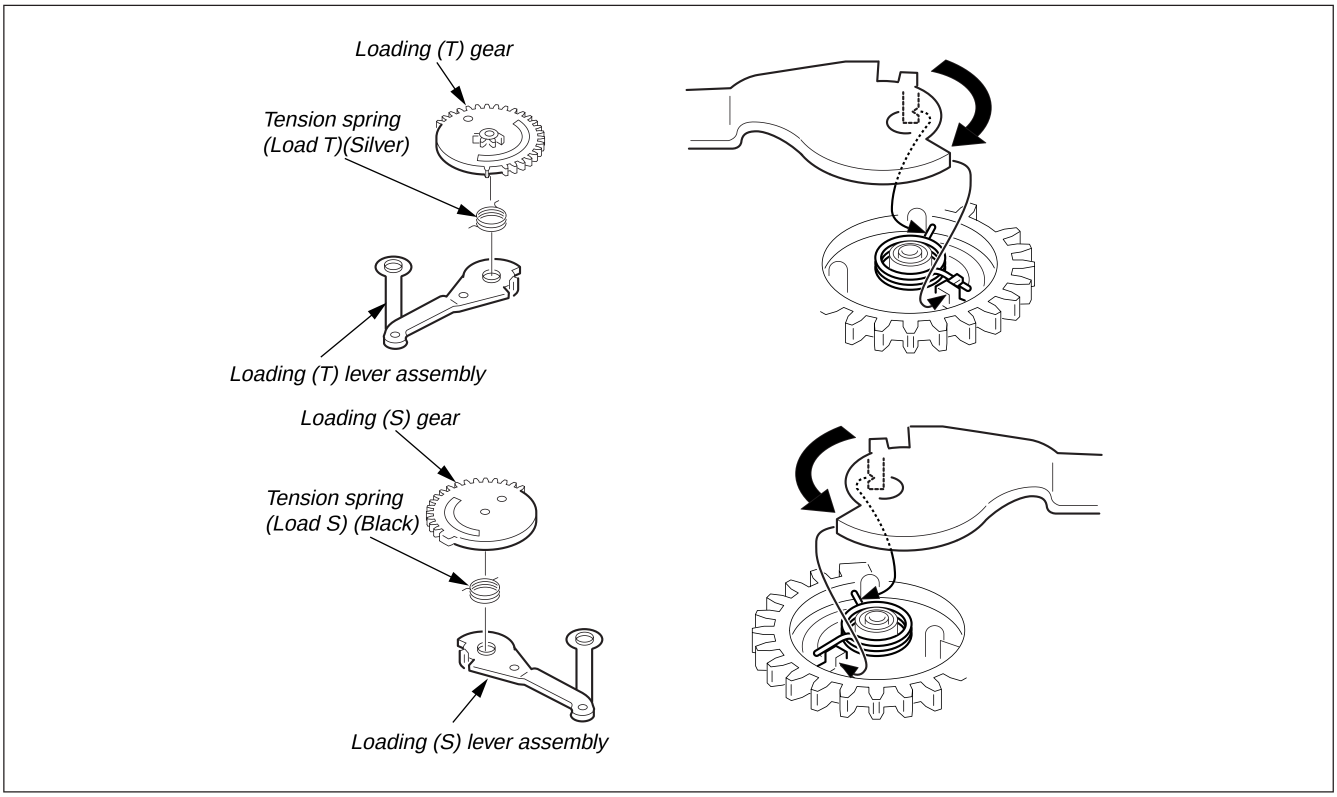

Loading (T) gear
Tension spring (Load T)(Silver)
Loading (T) lever assembly
Loading (S) gear
Tension spring (Load S) (Black)
Loading (S) lever assembly

Fig. 3-23

## 3-19. PULLEY GEAR ASSEMBLY, CLUTCH GEAR

1) Remove rubber belt. (Refer to 3-5.)
2) Remove stopper washer ①.
3) Remove pulley gear assembly ② with clutch gear ③.

**[Note on Mounting]**

- When attaching them, don't insert strongly.

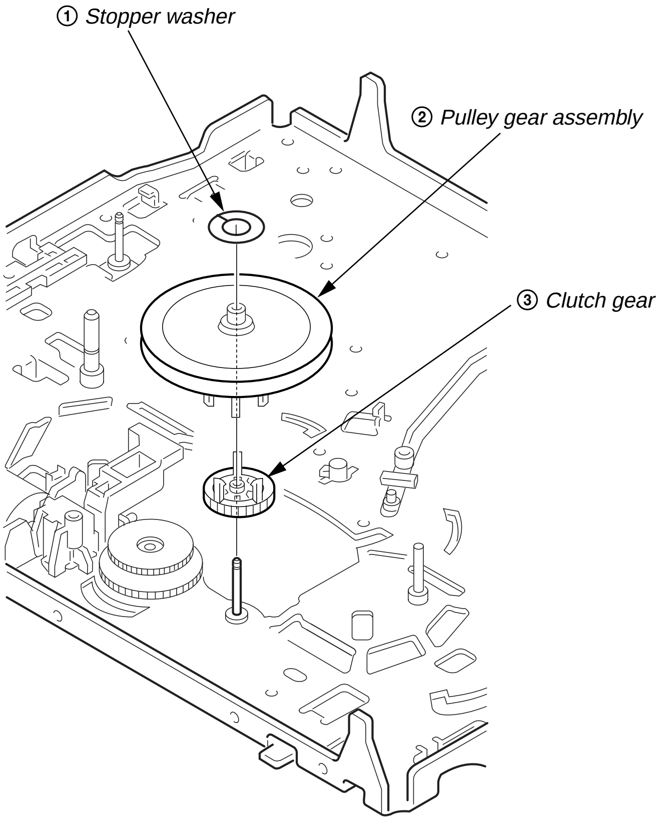

① Stopper washer
② Pulley gear assembly
③ Clutch gear

*Fig. 3-24*

## 3-20. REEL DIRECT ASSEMBLY

1) Remove rubber belt. (Refer to 3-5.)
2) Remove pulley gear assembly with clutch gear. (Refer to 3-20.)
3) Remove stopper washer ① and reel direct assembly ②.

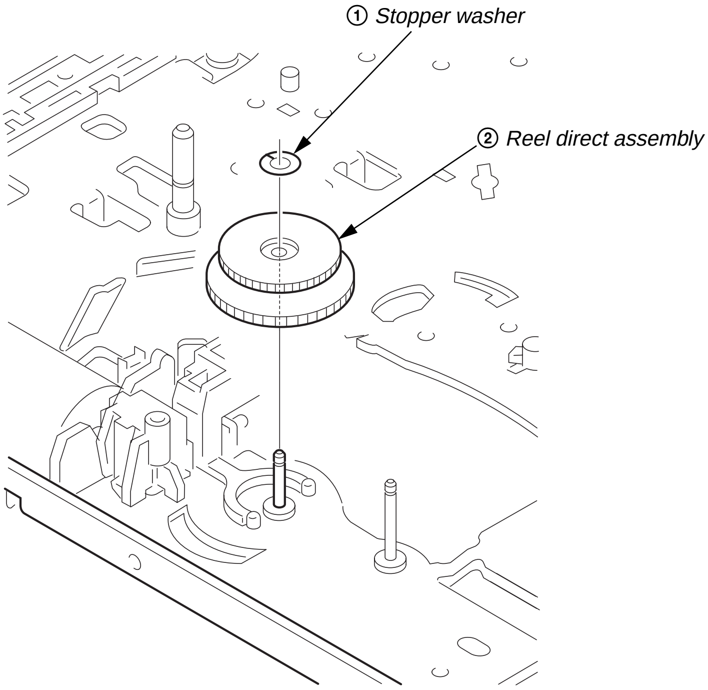

① Stopper washer
② Reel direct assembly

*Fig. 3-25*

## 3-21. CASSETTE GUIDE PLATE

1) Remove a screw (P 3 × 8) 1 and remove cassette guide plate ②.

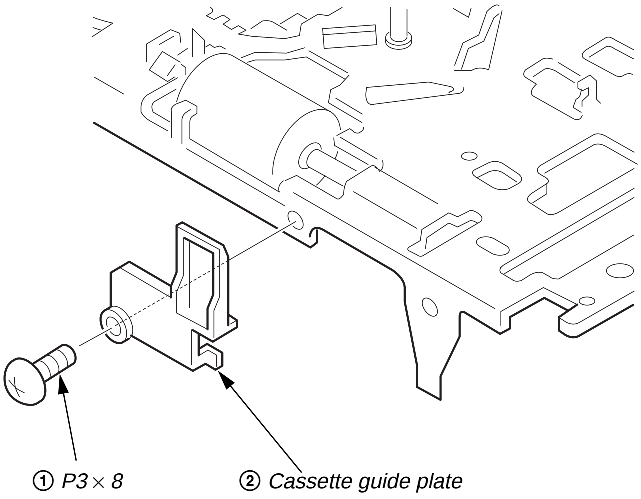

① P3 × 8
② Cassette guide plate

*Fig. 3-26*

## 3-22. CAM MOTOR ASSEMBLY, LIMITER SELECTION ARM

1) Remove FL complete assembly. (Refer to 3-1.)
2) Remove rubber belt. (Refer to 3-5.)
3) Remove FL slider block assembly. (Refer to 3-13.)
4) Remove worm wheel. (Refer to 3-14.)
5) Remove pulley gear assembly with clutch gear. (Refer to 3-20.)
6) Remove and reel direct assembly. (Refer to 3-21.)
7) Remove cam motor retainer ① in the arrow Ⓑwhile pushing its claw in the arrow Ⓐdirection.
8) Then cam motor assembly ② is out of place.
9) Remove the boss of limiter selection arm ③ from the hole on the mechanical chassis by pushing in the arrow Ⓒdirection and push it in the arrow D direction and remove it in the arrow Ⓔdirection.

### [Note on Mounting]

- Before attaching cam motor assembly ②, confirm the specified locations are coated with grease SG-646 (Ref. No. J-6).

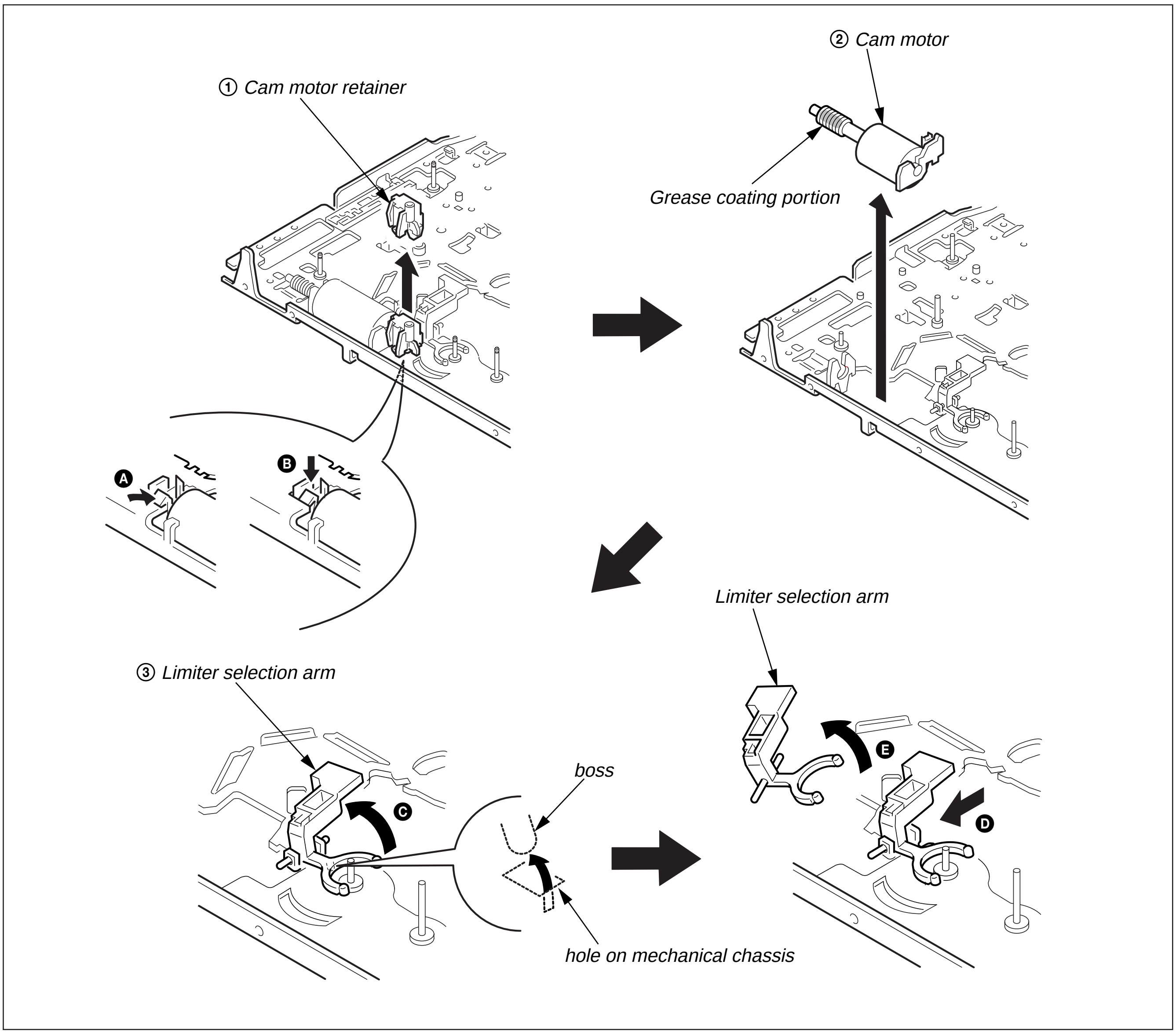

② Cam motor
① Cam motor retainer
Grease coating portion
A
B
Limiter selection arm
③ Limiter selection arm
boss
C
E
D
hole on mechanical chassis

Fig. 3-27

## 3-23. DRUM BASE, HC ROLLER BLOCK ASSEMBLY

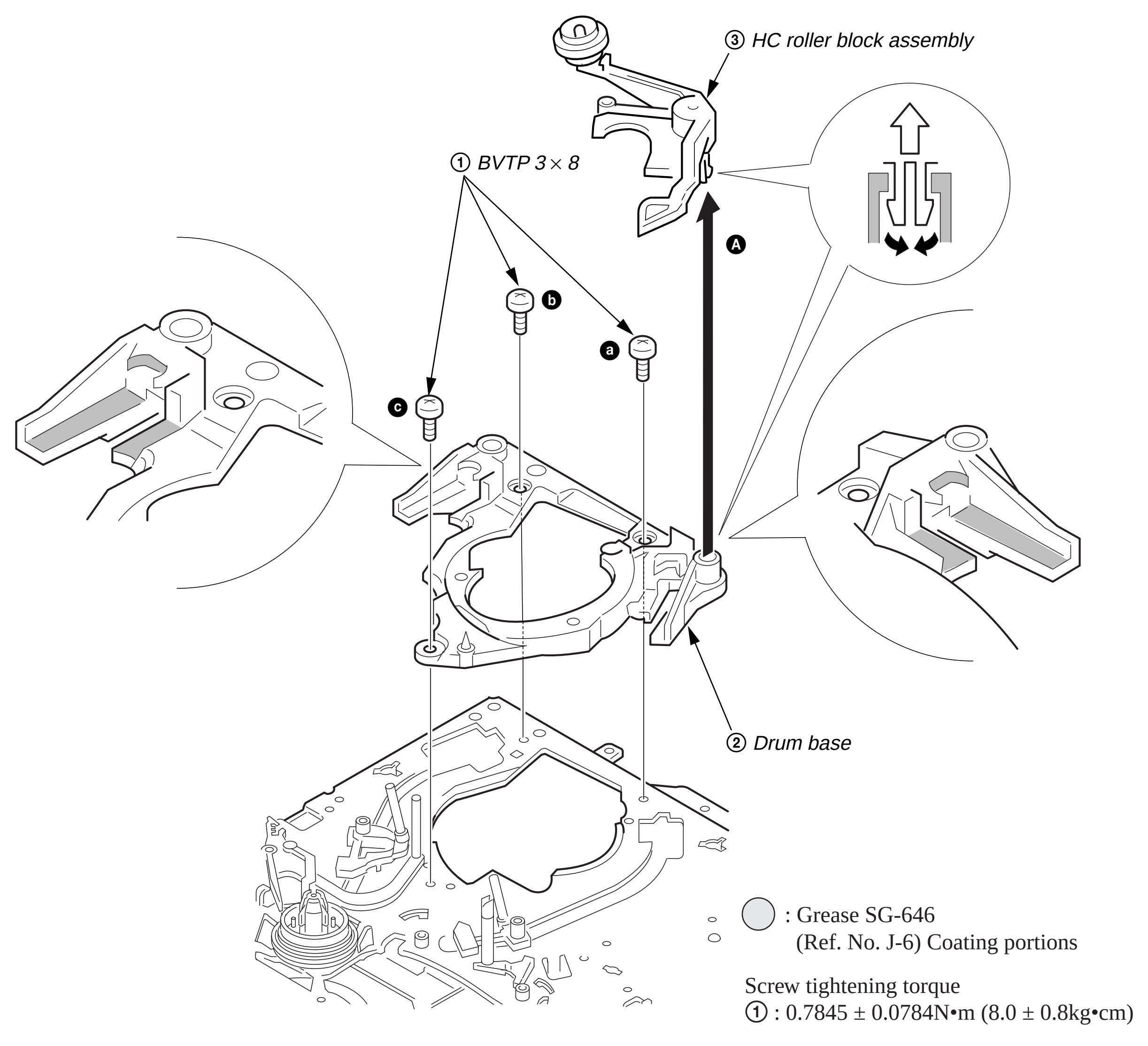
1) Remove the drum assembly. (Refer to 3-2.)
2) Remove screws BVTP 3 × 8 ①.
3) Remove drum base ②.
4) Pull out HC roller assembly ③ straight in the arrow 🅐 direction.

**[Note on Mounting]**

- Before attaching drum base ②, confirm the specified locations are coated with grease SG-646 (Ref. No. J-6).
- Tightening screws ① in the order ⓐ to ⓑ to ⓒ

**[Adjustment after Mounting]**

- 4-1. Tape path adjustment



: Grease SG-646 (Ref. No. J-6) Coating portions

Screw tightening torque
① : 0.7845 ± 0.0784N•m (8.0 ± 0.8kg•cm)

Fig. 3-28

## 3-24. SHUTTLE (S) AND SHUTTLE (T) BLOCK ASSEMBLIES

### 1. Guide Roller Assemblies

1) Turn them counterclockwise, then they are out of place, also springs.

**[Note on Mounting]**

Don’t touch the surface that contacts tape with bare hand.

**[Adjustment after Mounting]**

- 4-1. Tape path adjustment

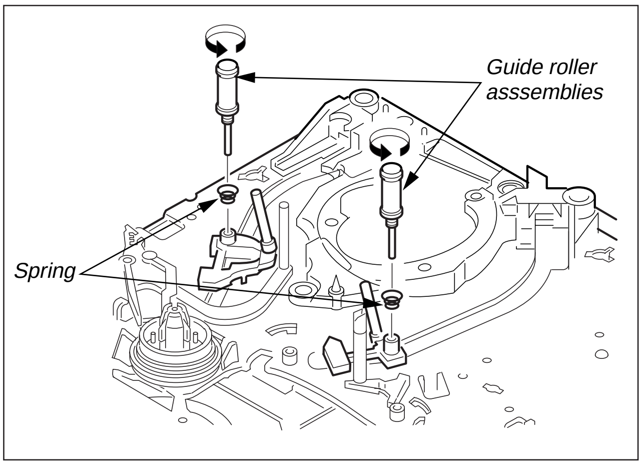

Guide roller
asssemblies
Spring

Fig. 3-29

### 2. Shuttle (S) and Shuttle (T) Assemblies

1) Remove FL complete assembly. (Refer to 3-1.)
2) Remove the drum assembly. (Refer to 3-2.)
3) Remove rubber belt. (Refer to 3-5.)
4) Remove FL slider block assembly. (Refer to 3-13.)
5) Remove cam gear. (Refer to 3-14.)
6) Remove slider. (Refer to 3-17.)
7) Remove loading (T) gear assembly and loading (S) gear assembly. (Refer to 3-19.)
8) Remove drum base. (Refer to 3-24.)
9) Remove shuttle (S) or shuttle (T) assembly by slide them backward.

**[Note on Mounting]**

Don’t touch the surface that contacts tape with bare hand.

**[Adjustment after Mounting]**

- 4-1. Tape path adjustment

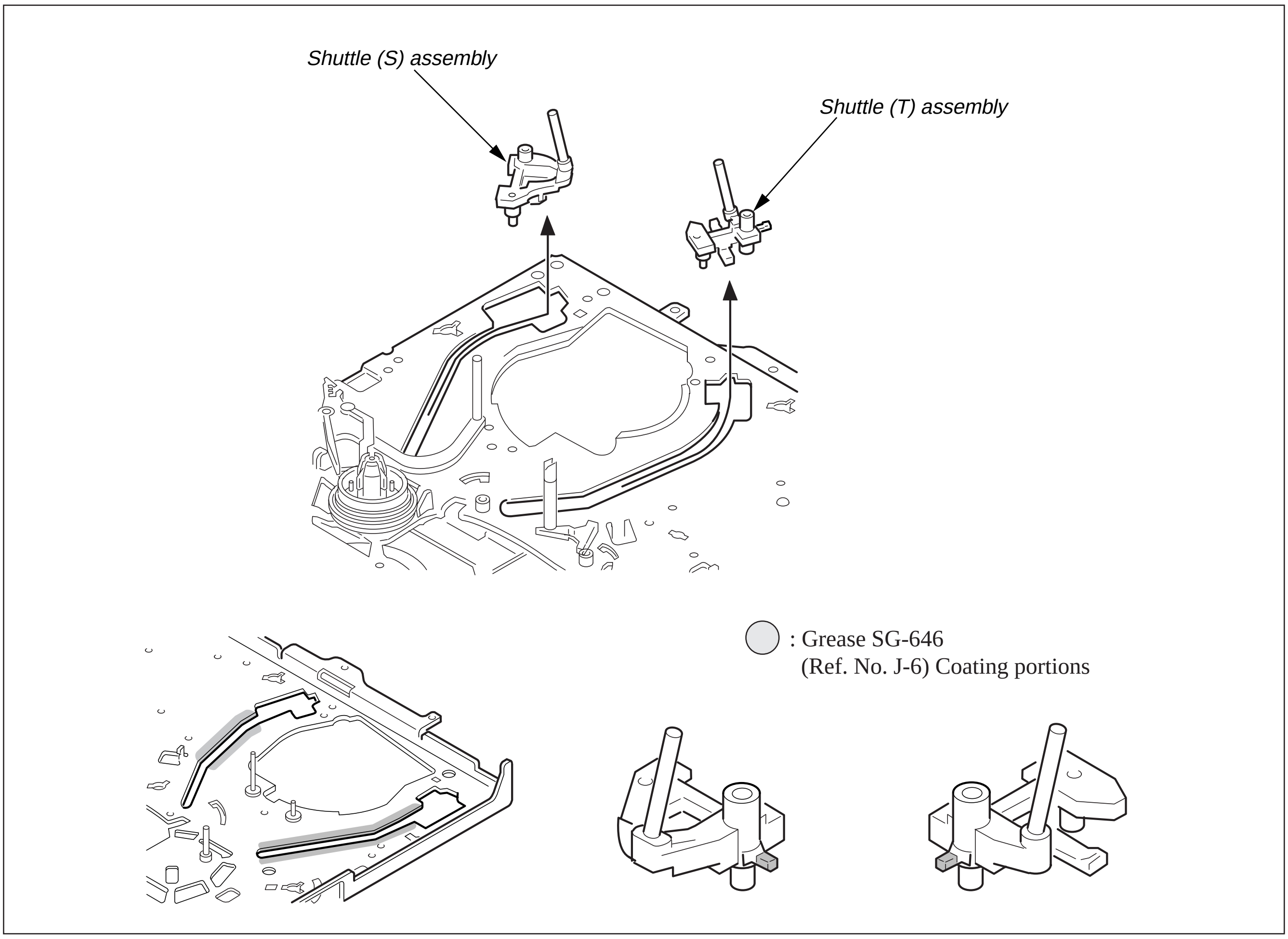

Shuttle (S) assembly
Shuttle (T) assembly
○ : Grease SG-646
(Ref. No. J-6) Coating portions

Fig. 3-30

## 3-25. TG1 ASSEMBLY, REEL (S) TABLE

1) Remove FL complete assembly. (Refer to 3-1.)
2) Remove spring (power tension) ① from TG1 driving arm.
3) While spreading claws on the bottom in the arrows Ⓐ direction, pull TG1 assembly ② out.
4) While spreading claws on the top in the arrows Ⓑ direction, pull reel (S) table ③ out.
5) Remove thrust washer ④.

### [Note on Mounting]

Don't touch the surface that contacts tape and the braking surface of TG1 assembly with bare hand.

### [Adjustment after Mounting]

- 4-1. Tape path adjustment

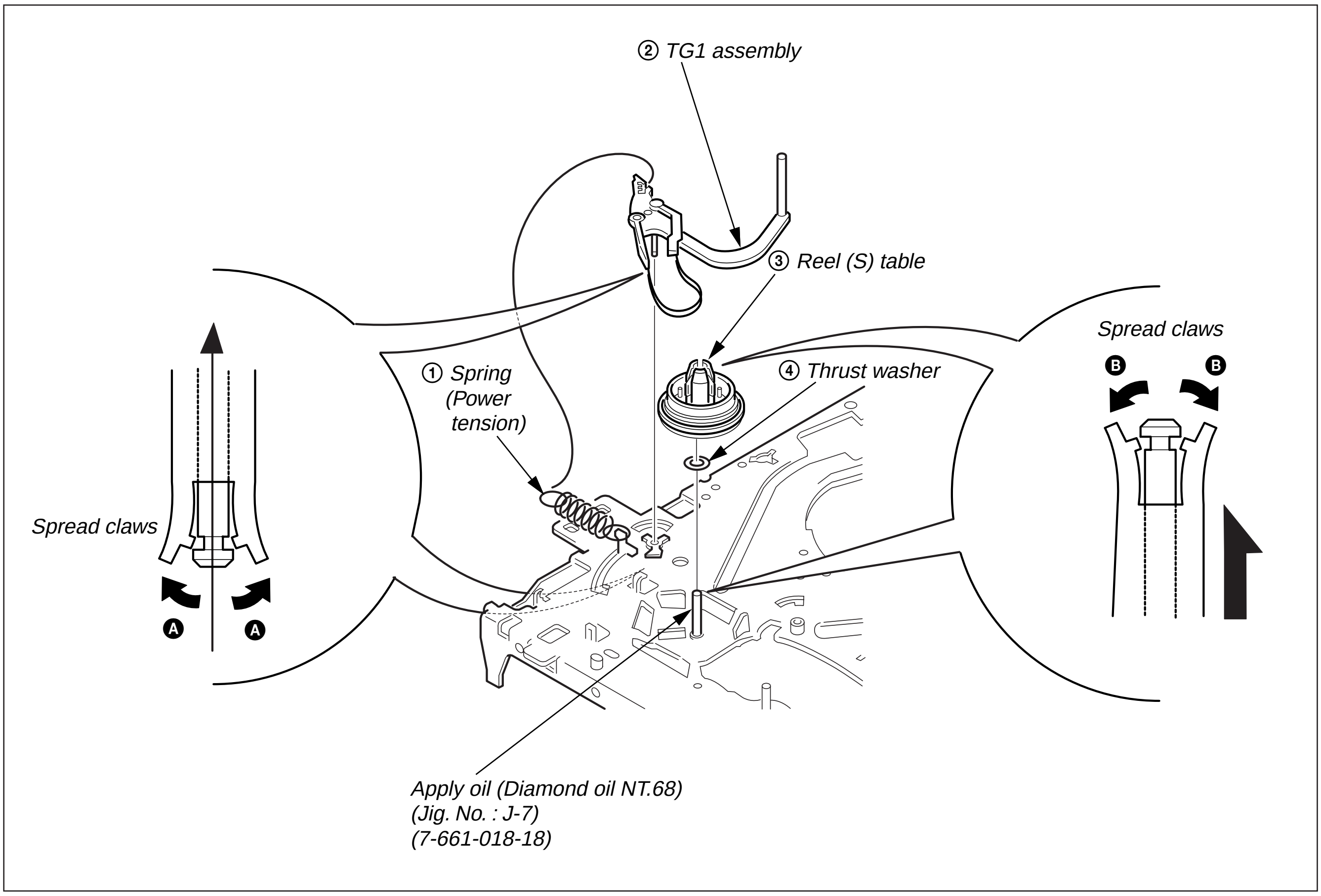

② TG1 assembly
③ Reel (S) table
Spread claws
Ⓑ
Ⓑ
① Spring (Power tension)
④ Thrust washer
Spread claws
Ⓐ
Ⓐ
Apply oil (Diamond oil NT.68) (Jig. No. : J-7) (7-661-018-18)

Fig. 3-31

## 3-26. TG1 FULCRUM BOSS

1) Remove FL complete assembly. (Refer to 3-1.)
2) Remove TG1 assembly. (Refer to 3-26.)
3) Turn TG1 fulcrum boss counterclockwise and pull it out.

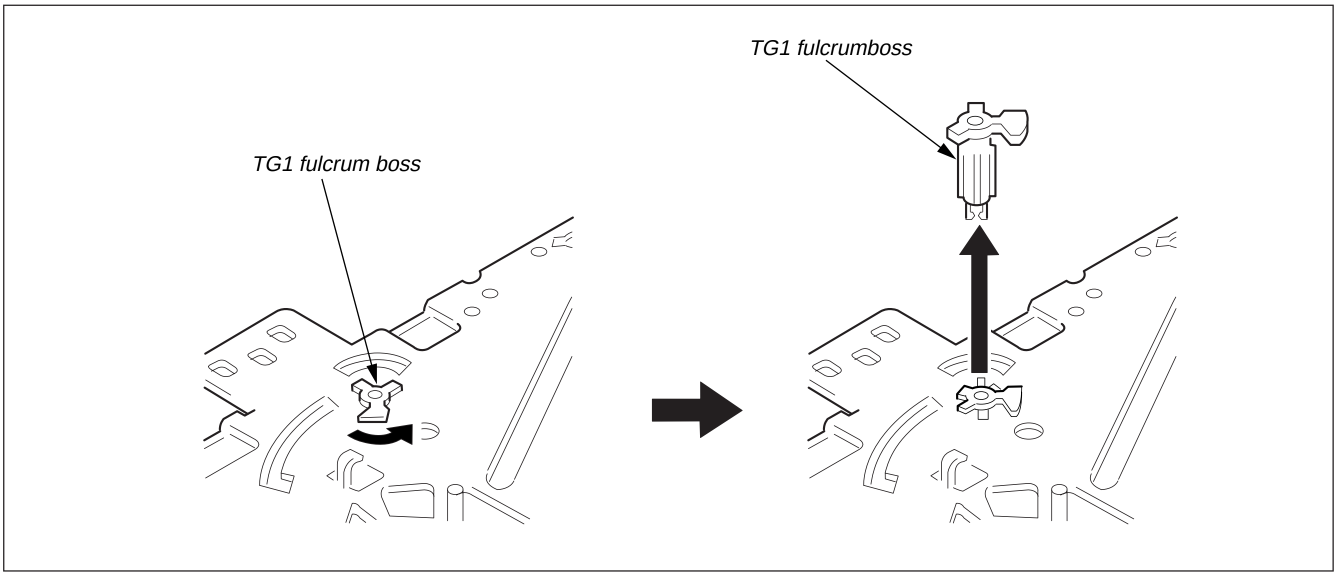

TG1 fulcrumboss
TG1 fulcrum boss

Fig. 3-32

## 3-27. LUMINOUS PLATE

1) Remove main (T) brake assembly. (Refer to 3-10.)
2) Turn luminous plate clockwise while raising a portion slightly and pull out it.

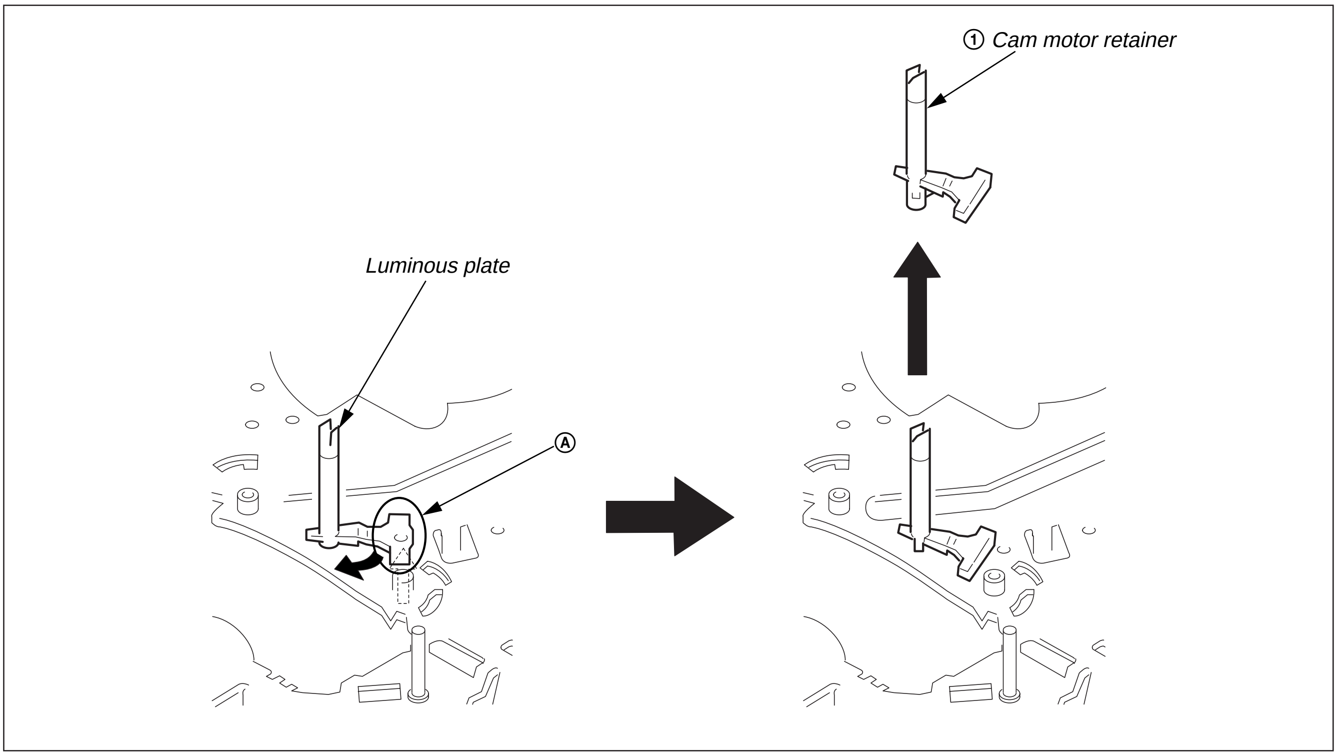

① Cam motor retainer
Luminous plate
Ⓐ

Fig. 3-33

# 4. ADJUSTMENT

## 4-1. TAPE PATH ADJUSTMENT

The “Tape path” refers to the route of the tape from the supply reel disk to the take-up reel disc via the video heads.

Each component part of the tape transport system particularly the surface of parts which make direct contact with the tape must always be kept clean, free of dust, oil, scratches and so forth.

The tape path system is factory pre-adjusted, when parts of the tape transport system are replaced, be sure to make the required adjustments as precisely as possible in order to ensure stable tape transport.

### 4-1-1. TENSION REGULATOR (TG1) POSITION/ TENSION ADJUSTMENT (Fig. 4-1)

**Purpose:** stabilizes contact of the video head and the tape to maintain the tension of the tape so that it feeds at a constant level.

**• Position adjustment**

| | |
|---|---|
| Mode | Threading is completed without a cassette loaded (Playback) |
| Adjustment locations | Eccentric pin of TG1 band assembly |

**[Adjustment Method]**

1) Allow the unit to go through the threading procedure without a cassette loaded.
2) Set the unit to play back, then turn the eccentric pin so that the tip of tension arm goes to the left side line carved on the mechanical chassis. (Fig. A)
3) After adjustment, go through the loading procedure once more without a cassette loaded, then check the position of the tension arm.

**• Tension adjustment**

| | |
|---|---|
| Mode | Playback (SP) |
| Measuring instrument/tool | Torque cassette VHT-103S<br>(Ref. No. J-1) |
| Adjustment locations | Position for hooking the tension spring |
| Specified value | 5.05 to 6.52 mN•m (51.5 to 66.5g•cm)<br>(without TC assembly)<br>3.78 to 5.10 mN•m (38.5 to 52.0g•cm)<br>(with TC assembly) |

**[Adjustment Method]**

1) Playback the torque cassette.
2) Check that the center value deviation reading on the torque cassette meets with the standards.
3) When the reading is higher than the standards : Move the spring toward direction Ⓐ
   When the reading is less than the standards : Move the spring toward direction Ⓑ

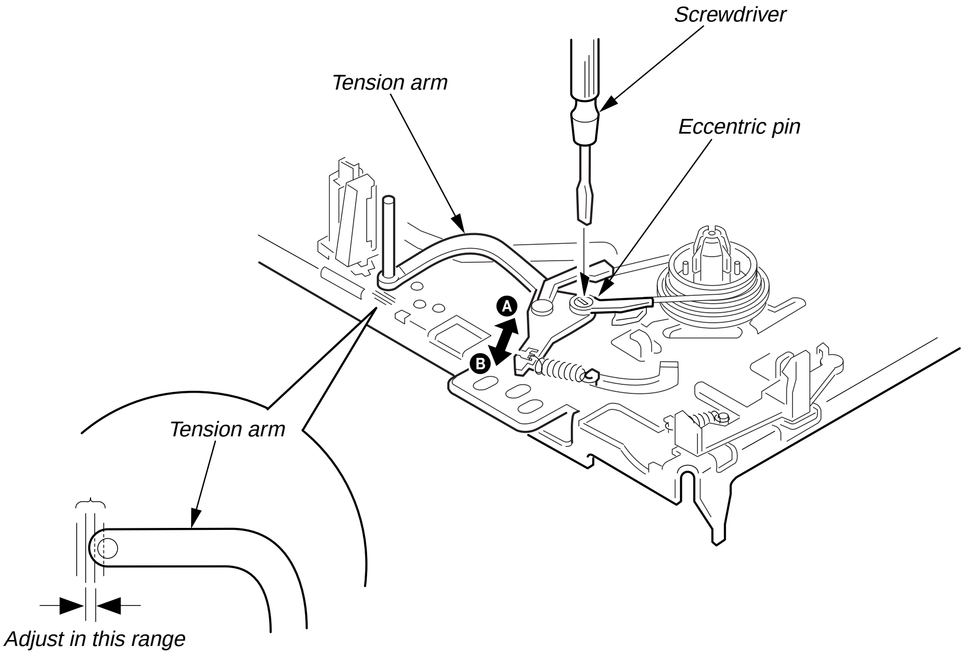


Fig. A

Fig. 4-1

### 4-1-2. CHECKING THE TENSION AND TORQUE

**Purpose :** To check that the tension, torque and compression force of the tape take-up section and mobile sections to ensure smooth tape run and achieve standard VTR performance.

If the tape transport is not smooth or problems occur in relation to the tape transport speed, perform the following check.

| | |
|---|---|
| Mode | Each operation mode |
| Measuring instrument | Torque cassette VHT-103S,<br>VHT-404S |

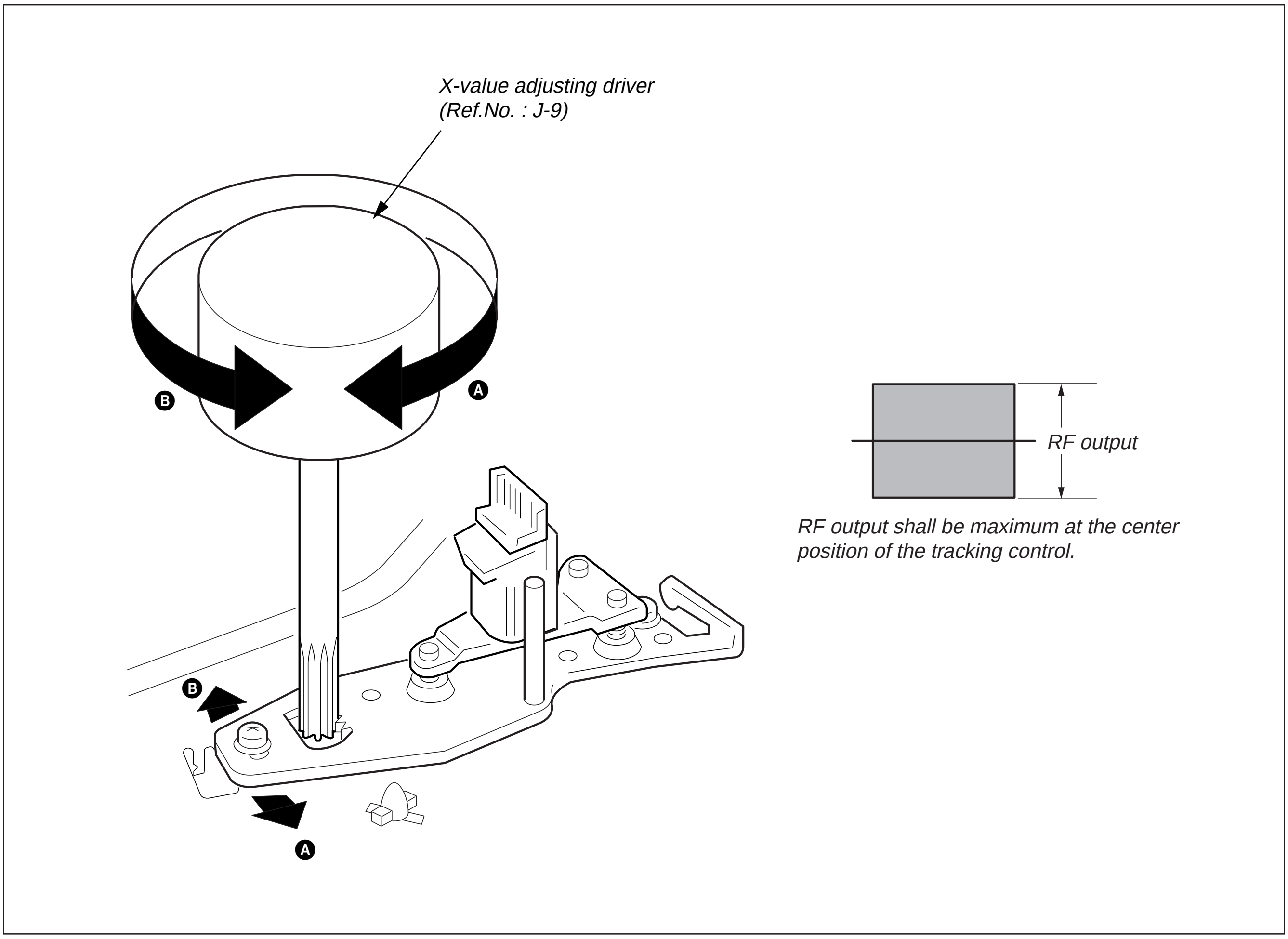
| Item | VTR operation mode | Reel to be measured | Measurement value |
|---|---|---|---|
| Review torque | Review | S reel | 12.7 to 19.6 mN•m (130 to 200 g•cm) |
| Take-up torque | Playback | T reel | 4.41 to 10.8 mN•m (45 to 110g•cm) |
| Back tension torque | Playback | S reel | See section 4-1-1. |

### 4-1-3. X-VALUE ADJUSTMENT (Using the tape having the version No.)

**Purpose:** To obtain compatibility with other VCRs.

**Precaution:** Before starting to adjust X-value, set the tracking control at the center position. To set the tracking control at the center position for the VCRs equipped with the ▲ and ▼ tracking control keys, press both the ▲ and ▼ tracking control keys at the same time. For the VCRs not equipped with the tracking control keys, deactivate the automatic tracking control by pressing the tracking AUTO/MANUAL key on the remote control unit during threading operation (after a tape is inserted but before the VCR starts playing back the tape).

| | |
|---|---|
| Mode | Playback |
| Signal | Alignment tape: KRV-52NE (NTSC)/<br>52PL(PAL) |
| Measuring instrument | Oscilloscope<br>TIME/DIV: 2ms<br>Trigger source: CH2<br>Trigger slope: + |
| Measuring point | CH1: Connector PB RF pin for RF PC board check<br>CH2: Connector RF SWP pin for RF PC board check |
| Adjustment locations | ACE base assembly |



RF output shall be maximum at the center position of the tracking control.

Fig. 4-2

**[Adjustment Method]**
Set the tracking control at the center position. For the VCRs equipped with standard gap video heads, set the ACE head position with X-value adjusting driver where a maximum RF output is obtained. For the VCRs equipped with wide gap video heads, set the ACE head position with X-value adjusting driver both where a maximum RF output is obtained and where the RF output decreases immediately when the ▼ tracking control key is pressed.

* TYPE OF DRUM

DZH-68D
DZH-71D
DZH-77A
DZH-78A
DZH-78B
DZH-89A
DZH-90A
DZH-91A
DZH-92A

### 1. Adjusting X-value (Using the tape having the version No.)

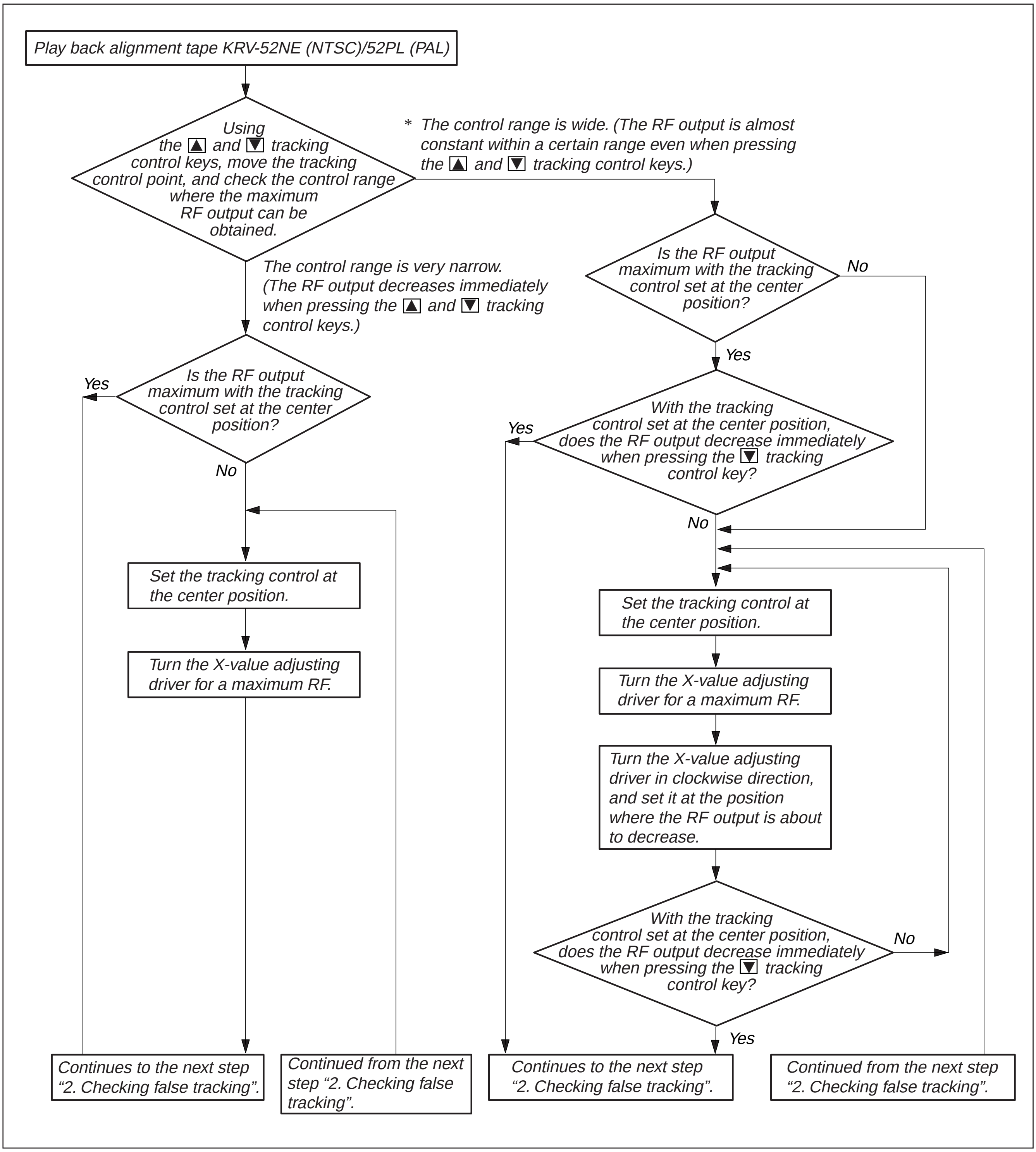
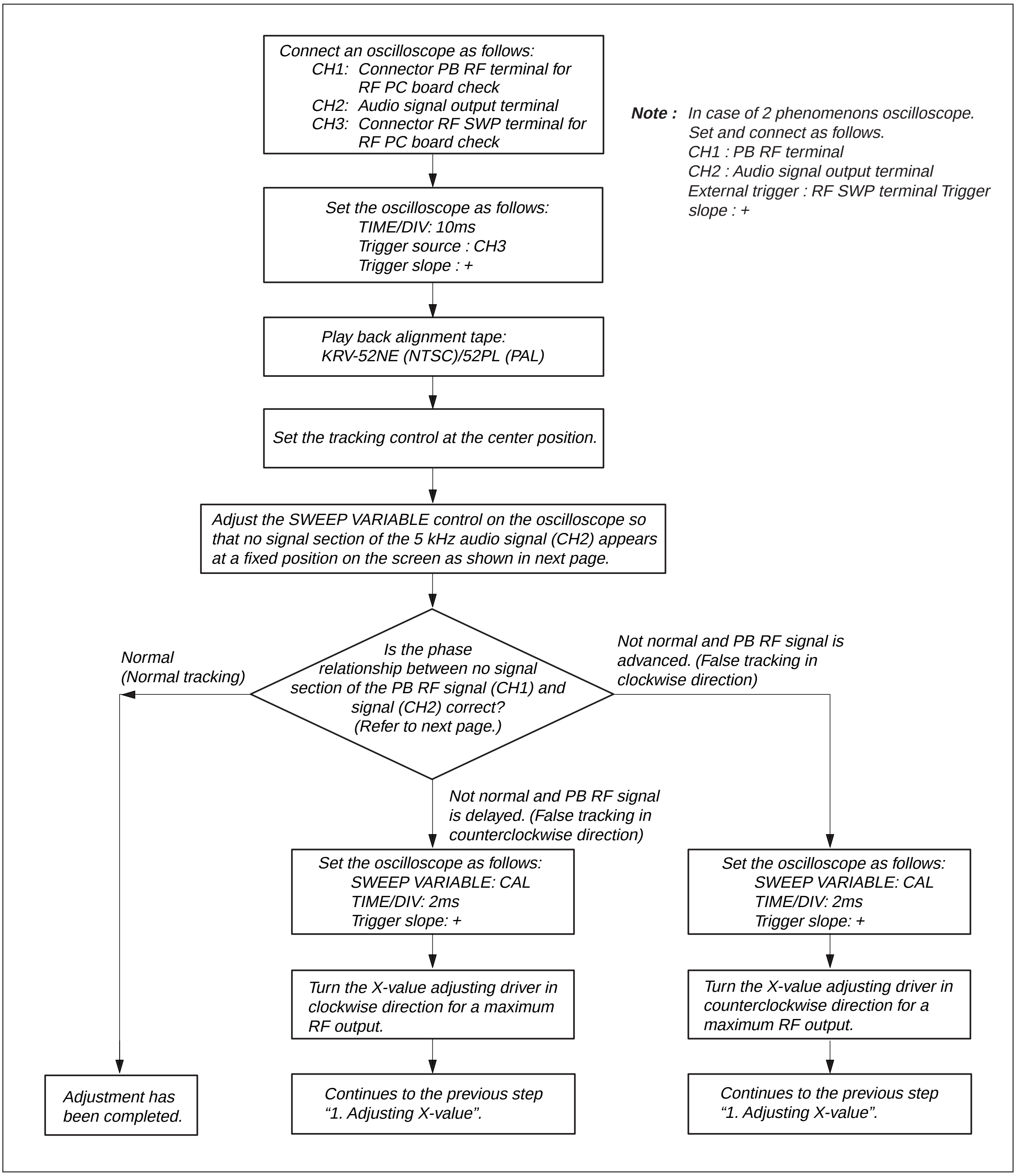

Play back alignment tape KRV-52NE (NTSC)/52PL (PAL)
Using the ▲ and ▼ tracking control keys, move the tracking control point, and check the control range where the maximum RF output can be obtained.
* The control range is wide. (The RF output is almost constant within a certain range even when pressing the ▲ and ▼ tracking control keys.)
The control range is very narrow. (The RF output decreases immediately when pressing the ▲ and ▼ tracking control keys.)
Is the RF output maximum with the tracking control set at the center position?
No
Yes
Is the RF output maximum with the tracking control set at the center position?
Yes
No
With the tracking control set at the center position, does the RF output decrease immediately when pressing the ▼ tracking control key?
Yes
No
Set the tracking control at the center position.
Turn the X-value adjusting driver for a maximum RF.
Set the tracking control at the center position.
Turn the X-value adjusting driver for a maximum RF.
Turn the X-value adjusting driver in clockwise direction, and set it at the position where the RF output is about to decrease.
With the tracking control set at the center position, does the RF output decrease immediately when pressing the ▼ tracking control key?
No
Yes
Continues to the next step "2. Checking false tracking".
Continued from the next step "2. Checking false tracking".
Continues to the next step "2. Checking false tracking".
Continued from the next step "2. Checking false tracking".

*Table. 4-1*

## 2. Checking false tracking (Using the tape having the version No.)


Connect an oscilloscope as follows:
CH1: Connector PB RF terminal for RF PC board check
CH2: Audio signal output terminal
CH3: Connector RF SWP terminal for RF PC board check
Set the oscilloscope as follows:
TIME/DIV: 10ms
Trigger source : CH3
Trigger slope : +
Play back alignment tape:
KRV-52NE (NTSC)/52PL (PAL)
Set the tracking control at the center position.
Adjust the SWEEP VARIABLE control on the oscilloscope so that no signal section of the 5 kHz audio signal (CH2) appears at a fixed position on the screen as shown in next page.
Is the phase relationship between no signal section of the PB RF signal (CH1) and signal (CH2) correct? (Refer to next page.)
Normal (Normal tracking)
Not normal and PB RF signal is advanced. (False tracking in clockwise direction)
Not normal and PB RF signal is delayed. (False tracking in counterclockwise direction)
Set the oscilloscope as follows:
SWEEP VARIABLE: CAL
TIME/DIV: 2ms
Trigger slope: +
Turn the X-value adjusting driver in clockwise direction for a maximum RF output.
Continues to the previous step “1. Adjusting X-value”.
Set the oscilloscope as follows:
SWEEP VARIABLE: CAL
TIME/DIV: 2ms
Trigger slope: +
Turn the X-value adjusting driver in counterclockwise direction for a maximum RF output.
Continues to the previous step “1. Adjusting X-value”.
Adjustment has been completed.

**Note :** *In case of 2 phenomenons oscilloscope.*
*Set and connect as follows.*
*CH1 : PB RF terminal*
*CH2 : Audio signal output terminal*
*External trigger : RF SWP terminal Trigger slope : +*

*Table. 4-2*

**Using the tape having the version No.**

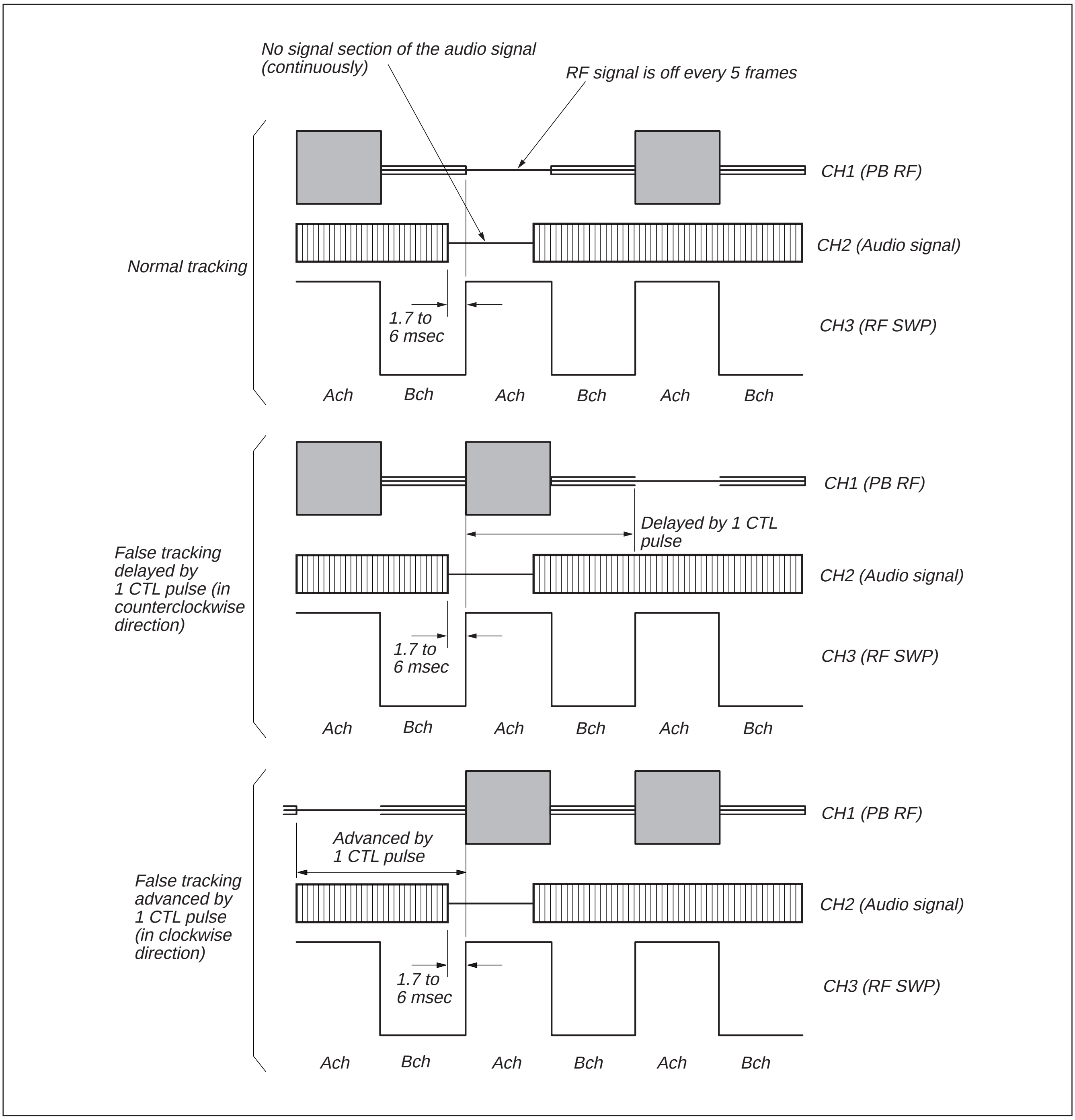

No signal section of the audio signal (continuously)
RF signal is off every 5 frames
Normal tracking
CH1 (PB RF)
CH2 (Audio signal)
CH3 (RF SWP)
1.7 to 6 msec
Ach
Bch
Ach
Bch
Ach
Bch
False tracking delayed by 1 CTL pulse (in counterclockwise direction)
Delayed by 1 CTL pulse
CH1 (PB RF)
CH2 (Audio signal)
CH3 (RF SWP)
1.7 to 6 msec
Ach
Bch
Ach
Bch
Ach
Bch
False tracking advanced by 1 CTL pulse (in clockwise direction)
Advanced by 1 CTL pulse
CH1 (PB RF)
CH2 (Audio signal)
CH3 (RF SWP)
1.7 to 6 msec
Ach
Bch
Ach
Bch
Ach
Bch

Table. 4-3

**[Adjustment Method (*For the VCRs Equipped with Narrow Gap Video Heads)]**

Set the tracking control at the center position. Set the ACE head position with X-value adjusting driver both where a maximum RF output is obtained and where the RF output decreases immediately when the ▲ tracking control key is pressed.

* TYPE OF DRUM
DZH-98A

### 1. Adjusting X-value (Using the tape having the version No.)

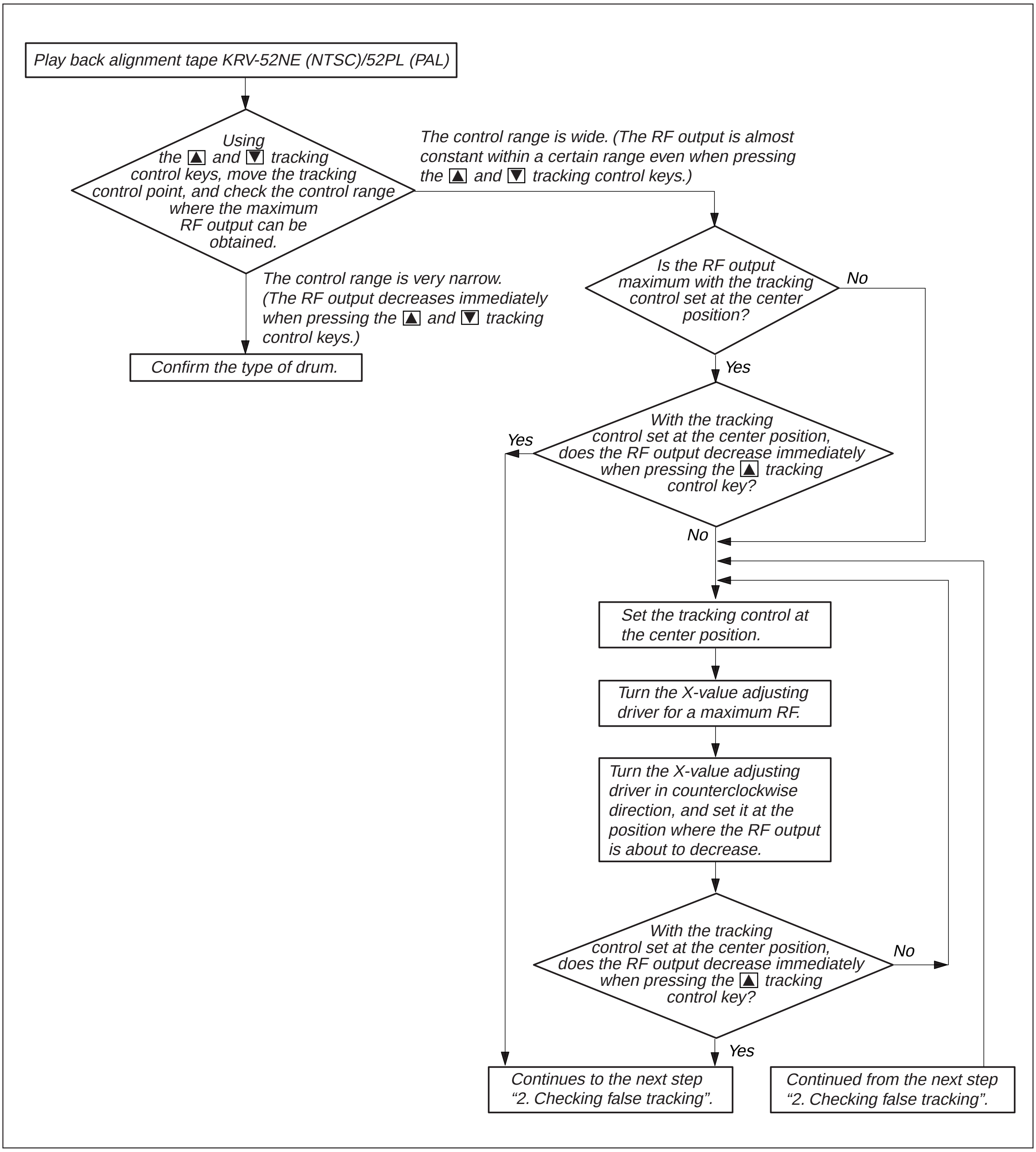
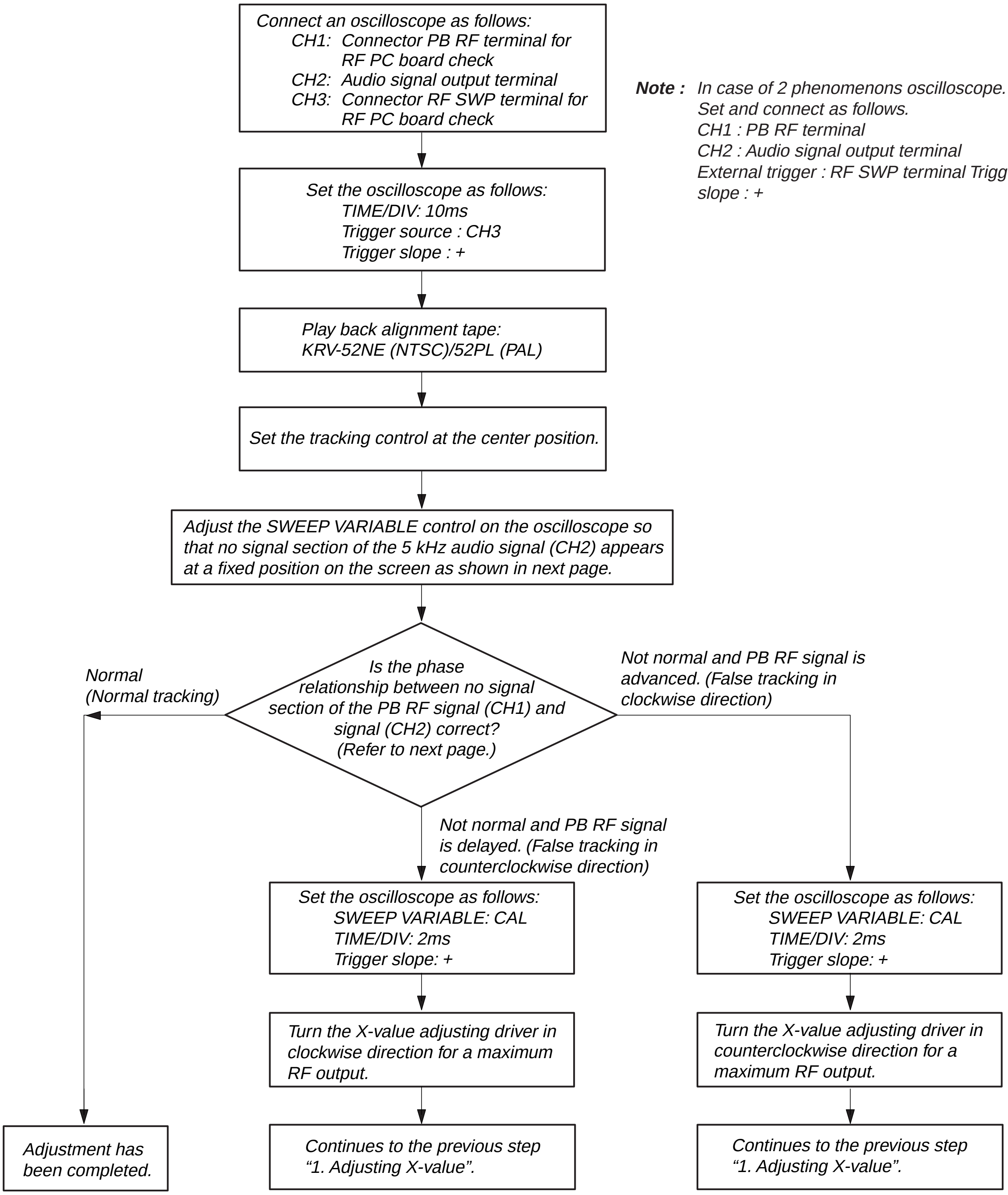

Play back alignment tape KRV-52NE (NTSC)/52PL (PAL)
Using the ▲ and ▼ tracking control keys, move the tracking control point, and check the control range where the maximum RF output can be obtained.
The control range is wide. (The RF output is almost constant within a certain range even when pressing the ▲ and ▼ tracking control keys.)
The control range is very narrow. (The RF output decreases immediately when pressing the ▲ and ▼ tracking control keys.)
Confirm the type of drum.
Is the RF output maximum with the tracking control set at the center position?
No
Yes
With the tracking control set at the center position, does the RF output decrease immediately when pressing the ▲ tracking control key?
Yes
No
Set the tracking control at the center position.
Turn the X-value adjusting driver for a maximum RF.
Turn the X-value adjusting driver in counterclockwise direction, and set it at the position where the RF output is about to decrease.
With the tracking control set at the center position, does the RF output decrease immediately when pressing the ▲ tracking control key?
No
Yes
Continues to the next step “2. Checking false tracking”.
Continued from the next step “2. Checking false tracking”.

Table. 4-4

## 2. Checking false tracking (Using the tape having the version No.)


Connect an oscilloscope as follows:
CH1: Connector PB RF terminal for RF PC board check
CH2: Audio signal output terminal
CH3: Connector RF SWP terminal for RF PC board check
Set the oscilloscope as follows:
TIME/DIV: 10ms
Trigger source : CH3
Trigger slope : +
Play back alignment tape:
KRV-52NE (NTSC)/52PL (PAL)
Set the tracking control at the center position.
Adjust the SWEEP VARIABLE control on the oscilloscope so that no signal section of the 5 kHz audio signal (CH2) appears at a fixed position on the screen as shown in next page.
Is the phase relationship between no signal section of the PB RF signal (CH1) and signal (CH2) correct? (Refer to next page.)
Normal (Normal tracking)
Not normal and PB RF signal is advanced. (False tracking in clockwise direction)
Not normal and PB RF signal is delayed. (False tracking in counterclockwise direction)
Set the oscilloscope as follows:
SWEEP VARIABLE: CAL
TIME/DIV: 2ms
Trigger slope: +
Set the oscilloscope as follows:
SWEEP VARIABLE: CAL
TIME/DIV: 2ms
Trigger slope: +
Turn the X-value adjusting driver in clockwise direction for a maximum RF output.
Turn the X-value adjusting driver in counterclockwise direction for a maximum RF output.
Adjustment has been completed.
Continues to the previous step "1. Adjusting X-value".
Continues to the previous step "1. Adjusting X-value".

**Note :** *In case of 2 phenomenons oscilloscope.*
*Set and connect as follows.*
*CH1 : PB RF terminal*
*CH2 : Audio signal output terminal*
*External trigger : RF SWP terminal Trigger slope : +*

*Table. 4-5*

**Using the tape having the version No.**

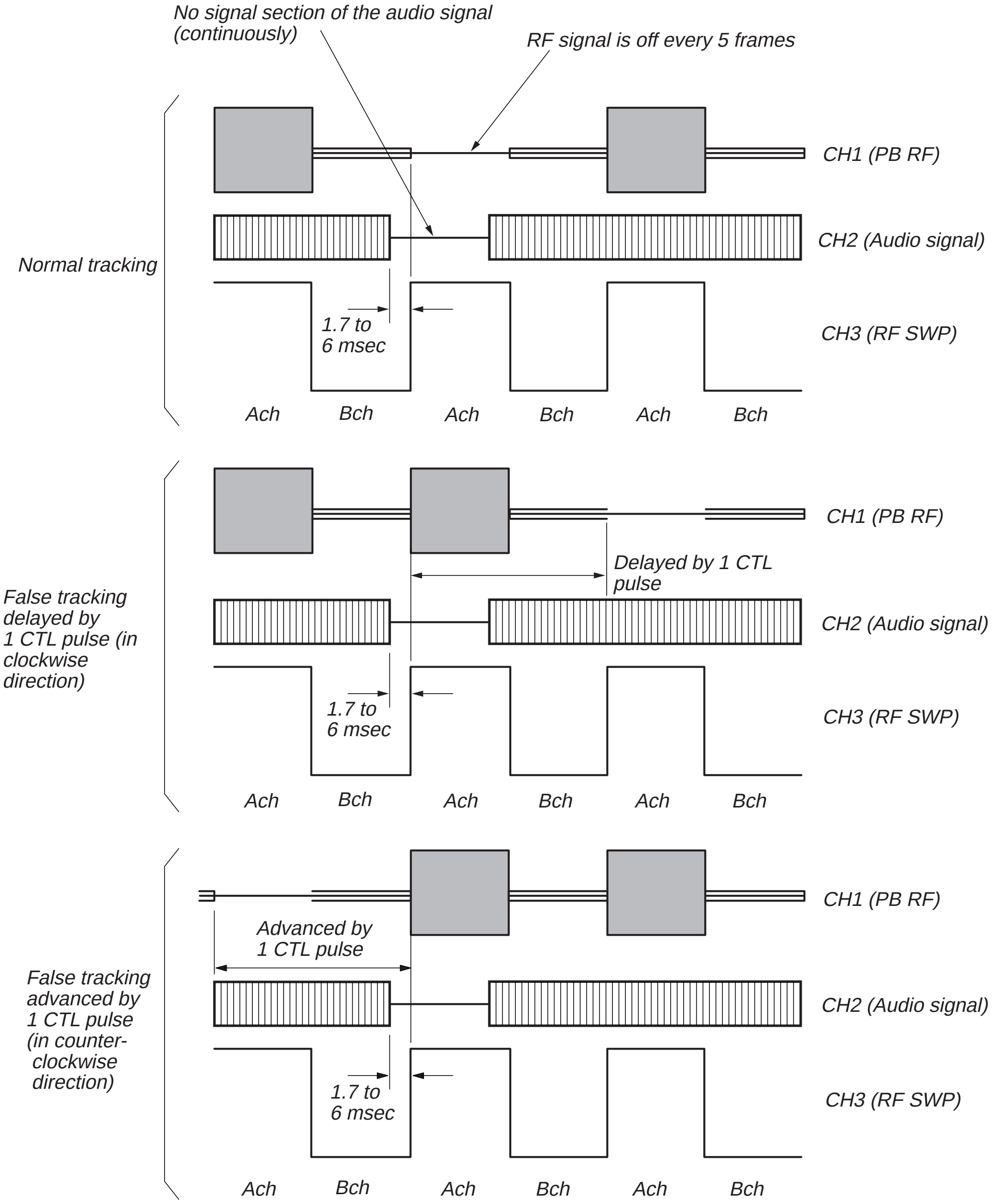

No signal section of the audio signal (continuously)
RF signal is off every 5 frames
Normal tracking
CH1 (PB RF)
CH2 (Audio signal)
CH3 (RF SWP)
1.7 to 6 msec
Ach
Bch
Ach
Bch
Ach
Bch
False tracking delayed by 1 CTL pulse (in clockwise direction)
Delayed by 1 CTL pulse
CH1 (PB RF)
CH2 (Audio signal)
CH3 (RF SWP)
1.7 to 6 msec
Ach
Bch
Ach
Bch
Ach
Bch
False tracking advanced by 1 CTL pulse (in counter-clockwise direction)
Advanced by 1 CTL pulse
CH1 (PB RF)
CH2 (Audio signal)
CH3 (RF SWP)
1.7 to 6 msec
Ach
Bch
Ach
Bch
Ach
Bch

Table. 4-6

**Reference**

## • X-VALUE ADJUSTMENT (Using KRV-52NE having no version No.)

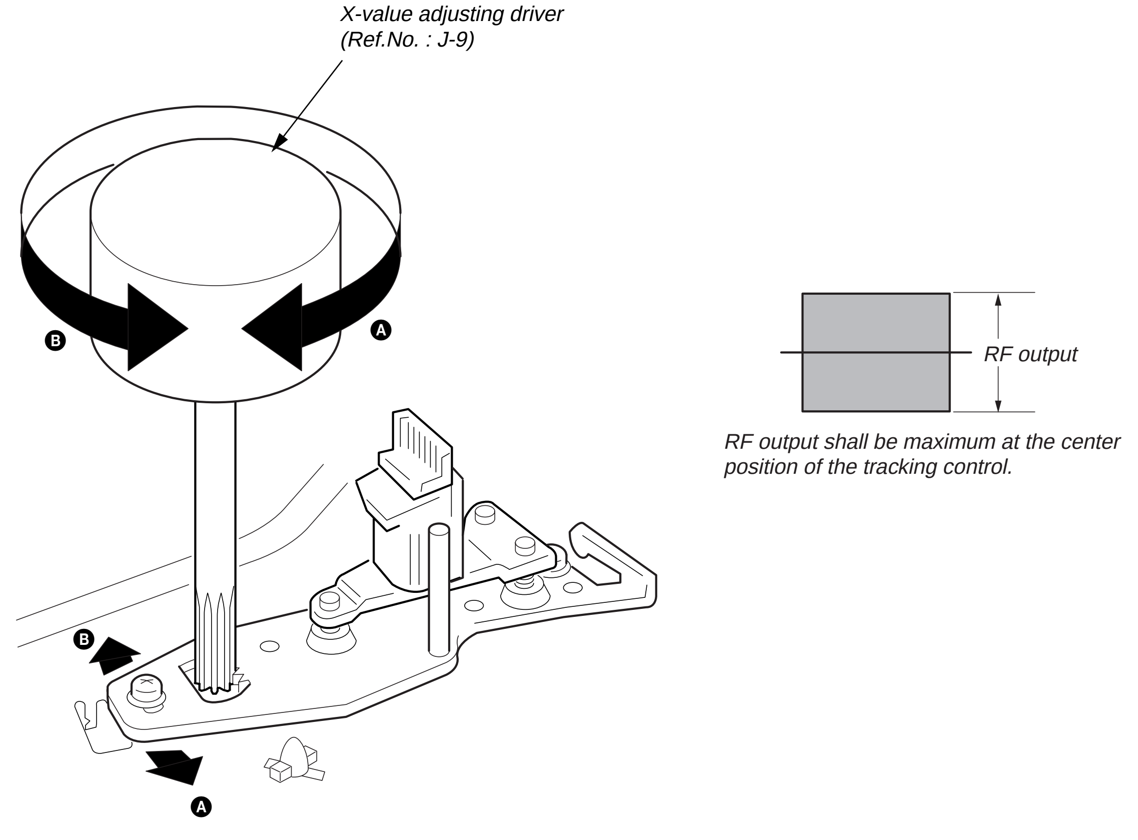
**Purpose :** To obtain compatibility with other VCRs.

**Precaution :** Before starting to adjust X-value, set the tracking control at the center position. To set the tracking control at the center position for the VCRs equipped with the ▲ and ▼ tracking control keys. Press both the ▲ and ▼ tracking control keys at the same time. For the VCRs not equipped with the tracking control keys, deactivate the automatic tracking control by pressing the tracking AUTO/MANUAL key on the remote control unit during threading operation (after a tape is inserted but before the VCR starts playing back the tape).

| | |
|---|---|
| Mode | Playback |
| Signal | Alignment tape: KRV-52NE<br>(For NTSC having no version No.) |
| Measuring instrument | Oscilloscope<br>TIME/DIV: 2ms<br>Trigger source: CH2<br>Trigger slope: + |
| Measuring point | CH1: Connector PB RF pin for RF PC board check<br>CH2 : Connector RF SWP pin for RF PC board check |
| Adjustment locations | ACE base assembly |

### [Adjustment Method]

Set the tracking control at the center position. For the VCRs equipped with standard gap video heads, set the X-value adjustment screw where a maximum RF output is obtained. For the VCRs equipped with wide gap video heads, set the X-value adjustment screw both where a maximum RF output is obtained and where the RF output decreases immediately when the ▼ tracking control key is pressed.



RF output shall be maximum at the center position of the tracking control.

Fig. 4-3

## X-VALUE ADJUSTMENT
## (Using the tape having no version No.)

* TYPE OF DRUM

DZH-68D DZH-89A
DZH-71D DZH-90A
DZH-77A DZH-91A
DZH-78A DZH-92A
DZH-78B

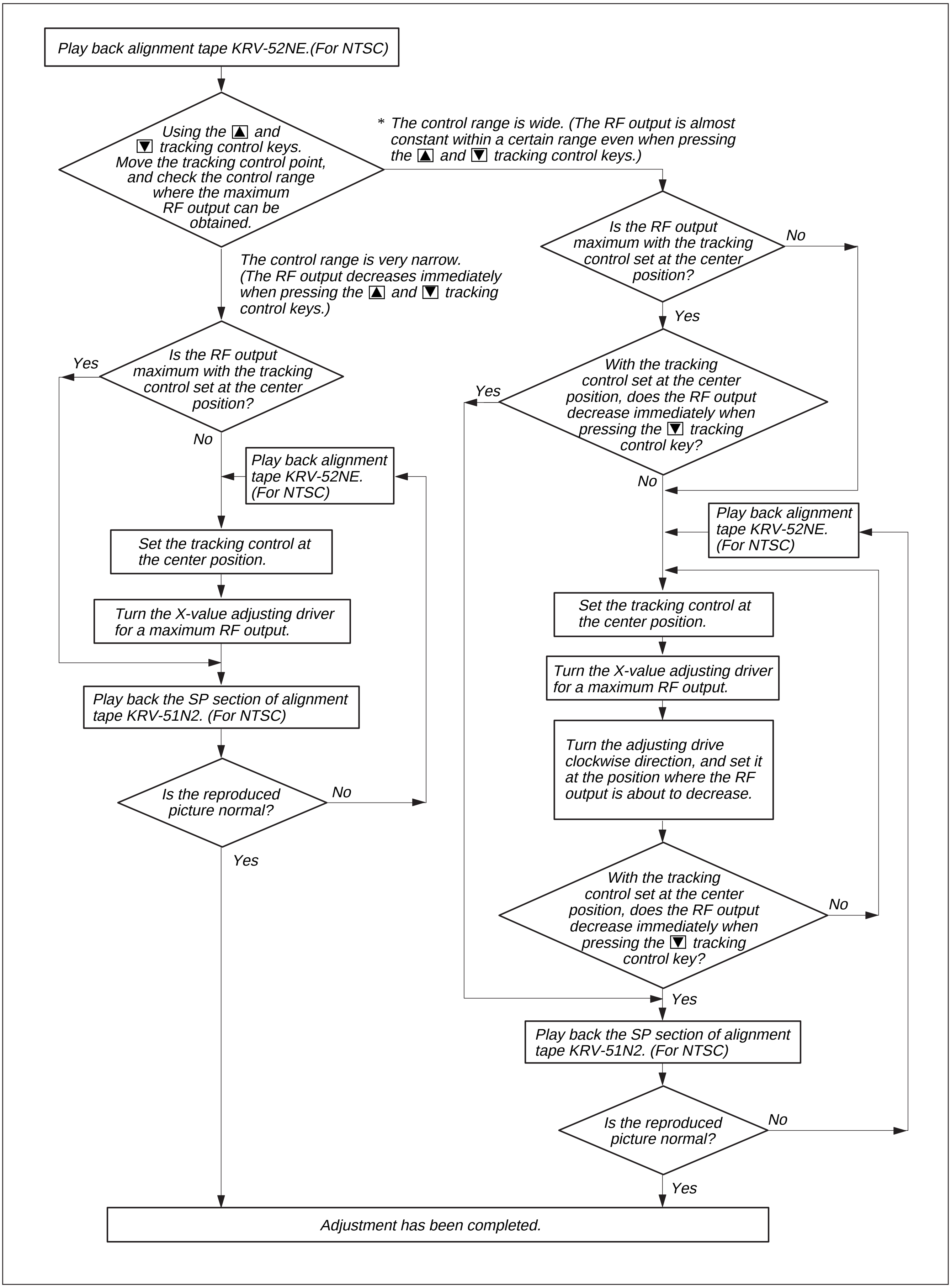

Play back alignment tape KRV-52NE.(For NTSC)
Using the ▲ and ▼ tracking control keys. Move the tracking control point, and check the control range where the maximum RF output can be obtained.
* The control range is wide. (The RF output is almost constant within a certain range even when pressing the ▲ and ▼ tracking control keys.)
The control range is very narrow. (The RF output decreases immediately when pressing the ▲ and ▼ tracking control keys.)
Is the RF output maximum with the tracking control set at the center position?
Yes
No
Play back alignment tape KRV-52NE. (For NTSC)
Set the tracking control at the center position.
Turn the X-value adjusting driver for a maximum RF output.
Play back the SP section of alignment tape KRV-51N2. (For NTSC)
Is the reproduced picture normal?
No
Yes
Is the RF output maximum with the tracking control set at the center position?
No
Yes
With the tracking control set at the center position, does the RF output decrease immediately when pressing the ▼ tracking control key?
Yes
No
Play back alignment tape KRV-52NE. (For NTSC)
Set the tracking control at the center position.
Turn the X-value adjusting driver for a maximum RF output.
Turn the adjusting drive clockwise direction, and set it at the position where the RF output is about to decrease.
With the tracking control set at the center position, does the RF output decrease immediately when pressing the ▼ tracking control key?
No
Yes
Play back the SP section of alignment tape KRV-51N2. (For NTSC)
Is the reproduced picture normal?
No
Yes
Adjustment has been completed.

Table. 4-7

### [Adjustment Method (*For the VCRs Equipped with Narrow Gap Video Heads)]

Set the tracking control at the center position. Set the ACE head position with X-value adjusting driver both where a maximum RF output is obtained and where the RF output decreases immediately when the ▲ tracking control key is pressed.

* TYPE OF DRUM
DZH-98A

**Using the tape having the version No.**

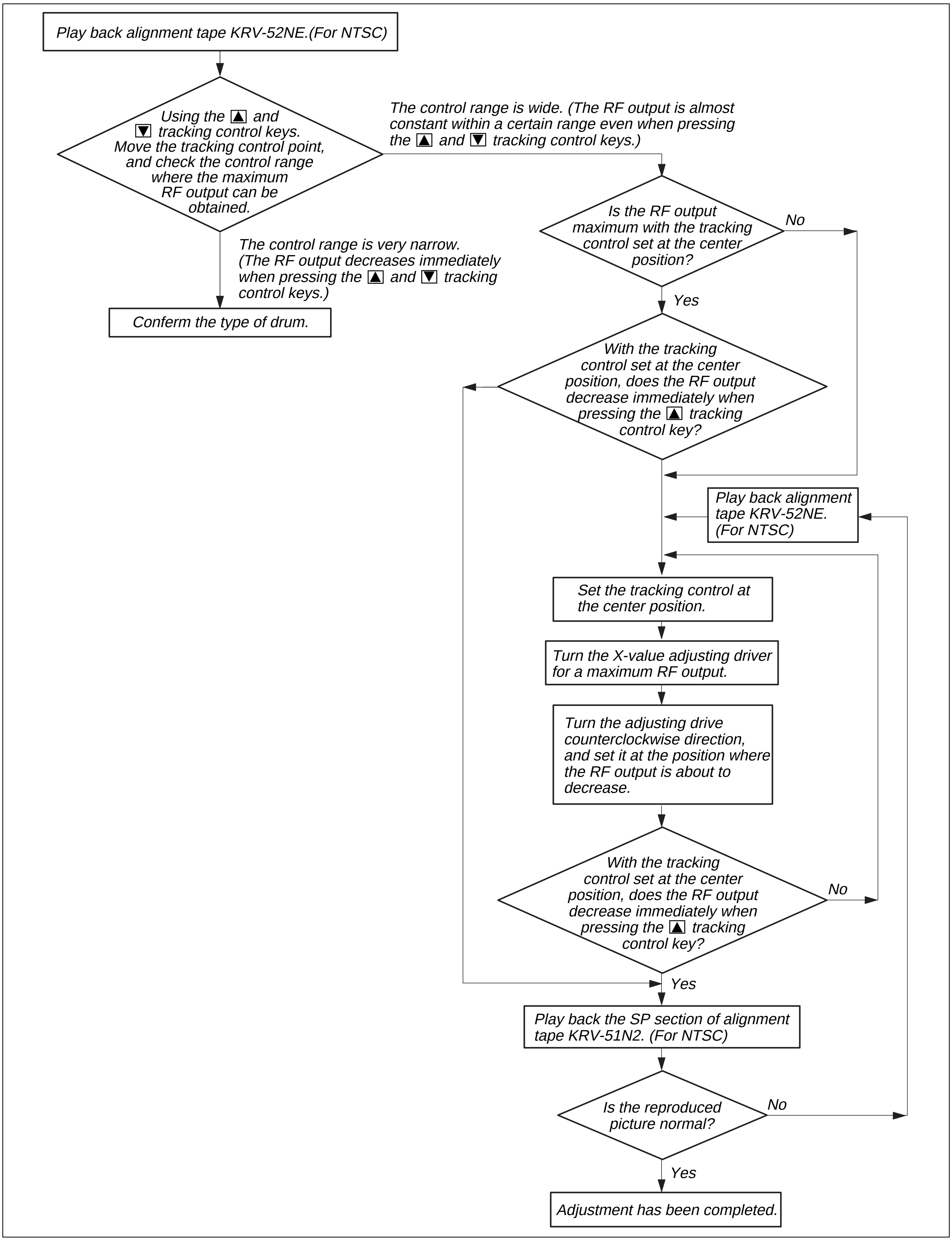

Play back alignment tape KRV-52NE.(For NTSC)
Using the ▲ and ▼ tracking control keys. Move the tracking control point, and check the control range where the maximum RF output can be obtained.
The control range is wide. (The RF output is almost constant within a certain range even when pressing the ▲ and ▼ tracking control keys.)
The control range is very narrow. (The RF output decreases immediately when pressing the ▲ and ▼ tracking control keys.)
Conferm the type of drum.
Is the RF output maximum with the tracking control set at the center position?
No
Yes
With the tracking control set at the center position, does the RF output decrease immediately when pressing the ▲ tracking control key?
Play back alignment tape KRV-52NE. (For NTSC)
Set the tracking control at the center position.
Turn the X-value adjusting driver for a maximum RF output.
Turn the adjusting drive counterclockwise direction, and set it at the position where the RF output is about to decrease.
With the tracking control set at the center position, does the RF output decrease immediately when pressing the ▲ tracking control key?
No
Yes
Play back the SP section of alignment tape KRV-51N2. (For NTSC)
Is the reproduced picture normal?
No
Yes
Adjustment has been completed.

Table. 4-9

### 4-1-4. HEIGHT ADJUSTMENT OF GUIDE ROLLERS NO. 3 AND NO. 6

| | |
|---|---|
| Mode | Playback |
| Signal | Alignment tape:<br>KRV-52NE (NTSC)/52PL (PAL) |
| Measuring instrument | Oscilloscope<br>TIME/DIV: 2ms<br>Trigger source: CH2<br>Trigger slope: + |
| Measuring point | CH1: Connector PB RF pin for RF PC board check<br>CH2: Connector RF SWP pin for RF PC board check |
| Adjustment locations | Height adjustment screw for No. 3 tape guide roller<br>Height adjustment screw for No. 6 tape guide roller |

**[Adjustment Method]**

The following adjustment shall be carried out after completed Section 4-1-2. X-VALUE ADJUSTMENT.

1) Deactivate the automatic tracking control, and set the tracking control at the center position. To set the tracking control at the center position for the VCRs equipped with the ▲ and ▼ tracking control keys, press both the ▲ and ▼ tracking control keys at the same time. For the VCRs not equipped with the tracking control keys, deactivate the automatic tracking control by pressing the tracking AUTO/MANUAL key on the remote control unit during threading operation (after a tape is inserted but before the VCR starts playing back the tape).
2) Check if the RF output changes in amplitude by pressing the tracking control key. The RF output should change periodically (changes from a minimum amplitude to a maximum amplitude, and to the minimum amplitude again).

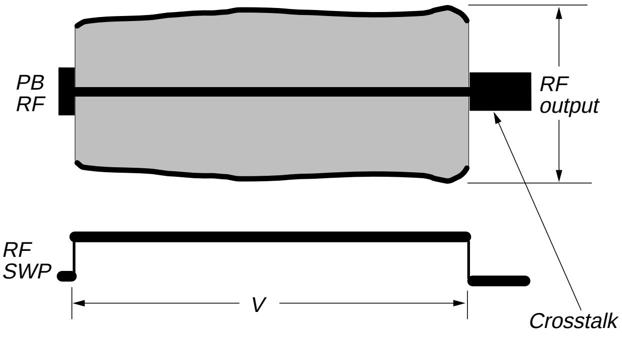
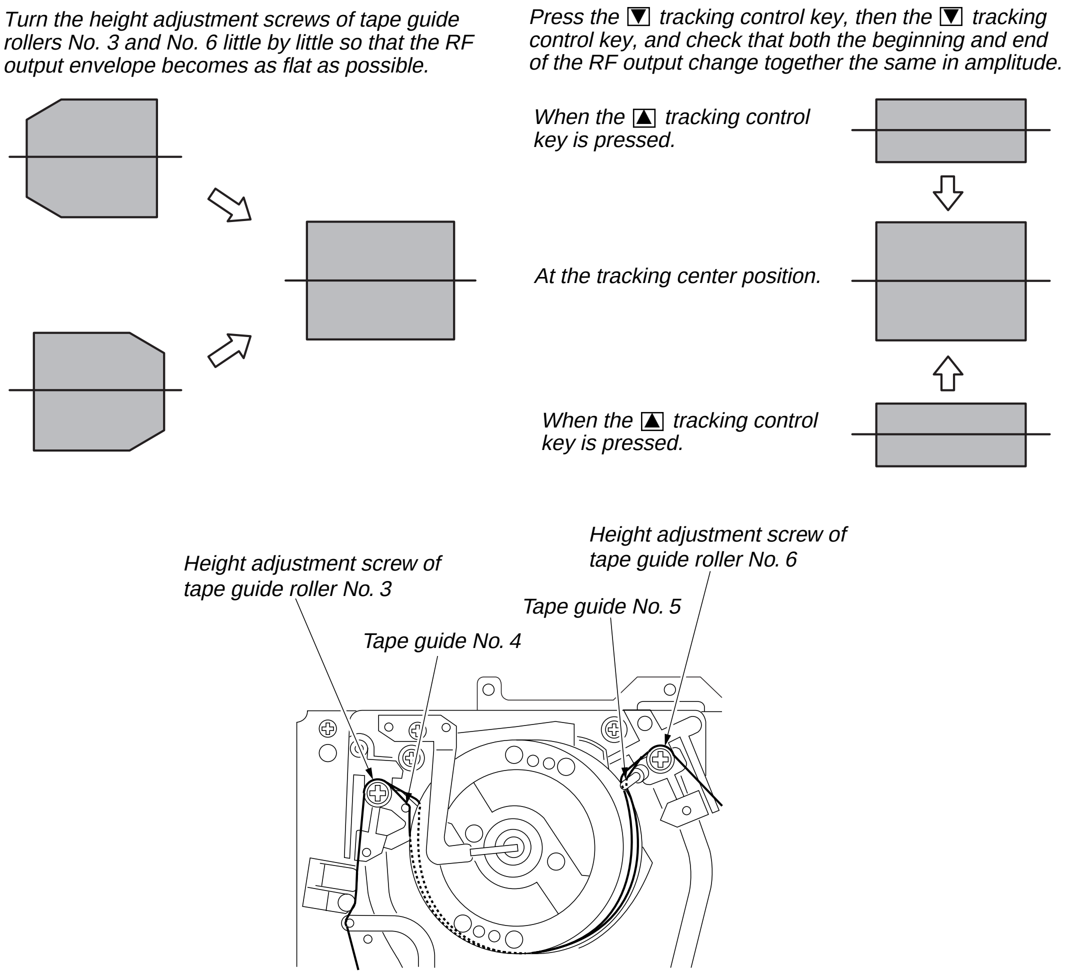

PB
RF
RF
output
RF
SWP
V
Crosstalk

*Fig. 4-4*

3) Turn the height adjustment screws of tape guide rollers No. 3 and No. 6 so that the RF output envelope becomes as flat as possible.
4) Press the ▲ tracking control key, and check that both the beginning and end of the RF output change together the same in amplitude.
5) Press the ▼ tracking control key, and check that both the beginning and end of the RF output change together the same in amplitude.



*Turn the height adjustment screws of tape guide rollers No. 3 and No. 6 little by little so that the RF output envelope becomes as flat as possible.*

*Press the ▼ tracking control key, then the ▼ tracking control key, and check that both the beginning and end of the RF output change together the same in amplitude.*

When the ▲ tracking control key is pressed.
At the tracking center position.
When the ▲ tracking control key is pressed.
Height adjustment screw of tape guide roller No. 3
Tape guide No. 4
Tape guide No. 5
Height adjustment screw of tape guide roller No. 6

*Fig. 4-5*

## 4-1-5. ACE HEAD ASSEMBLY HEIGHT AND AZIMUTH ADJUSTMENT

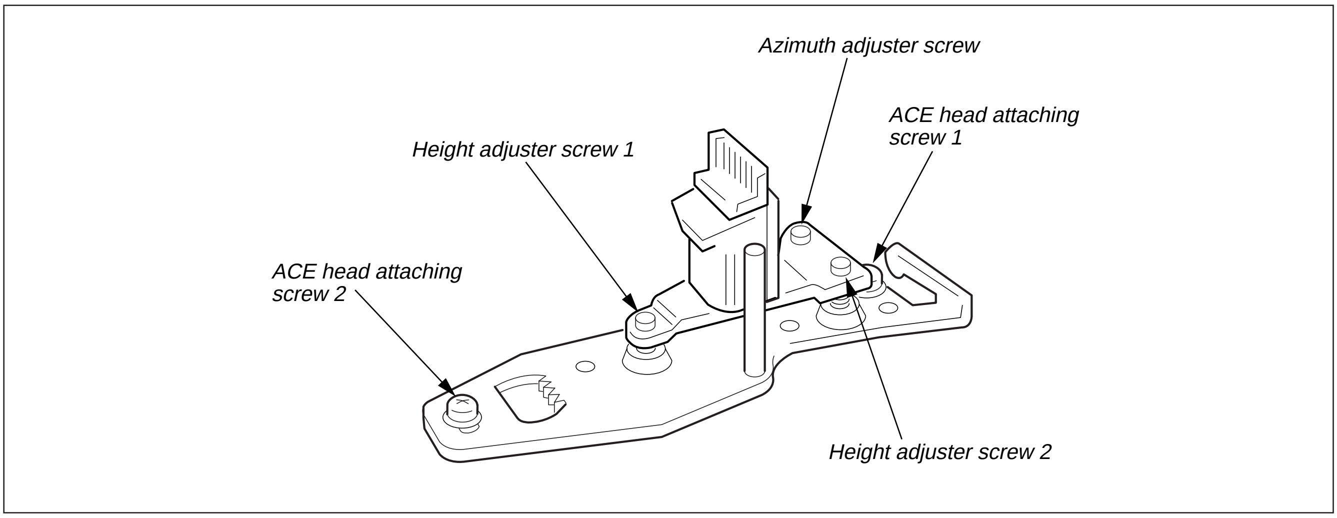

Azimuth adjuster screw
ACE head attaching screw 1
Height adjuster screw 1
ACE head attaching screw 2
Height adjuster screw 2

*Fig. 4-6*

| Mode | Playback |
|---|---|
| Signal | Alignment tape: (5kHz) KRV-52NE (NTSC)/52PL (PAL) |
| Measuring instrument | Oscilloscope |
| Measuring point | Audio output terminal |
| Adjustment locations | Azimuth adjuster screw,<br>Height adjuster screws 1 and 2. |

**[Adjustment Method]**

1) Adjust the height as shown in the figure with turning the height adjuster screws 1 and 2, and the azimuth adjuster screw in the same direction, the same degree gradually.

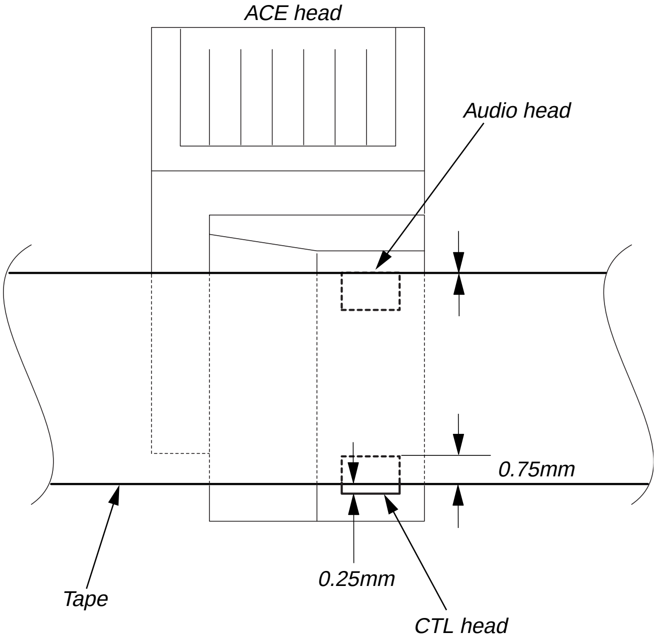

ACE head
Audio head
0.75mm
0.25mm
Tape
CTL head

*Fig. 4-7*

2) Alternately adjust the azimuth adjuster screw to make A maximum and B minimum. (To maintain even audio output at maximum with minimum deviation.)
3) Perform section 4-1-2. X-VALUE ADJUSTMENT.
4) Tighten ACE head attaching screw 2. (Torque: More than 0.29 N•m (3.0 kg•cm)).

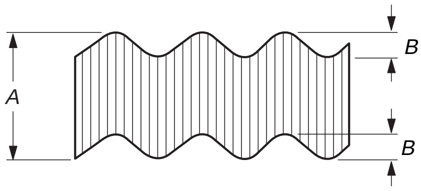


*Fig. 4-8*

### 4-1-6. X-VALUE FINE ADJUSTMENT

The procedure is the same as the item 4-1-3. Please refer to pages 37 to 46.

### 4-1-7. HEIGHT ADJUSTMENT OF GUIDE ROLLER NO. 8

**Note :** Applicable to the set having TG8 height adjusting screw as shown in the figure. Do not adjust when TG8 height adjusting screw is not attached.

| | |
|---|---|
| Mode | Playback |
| Signal | Any signal on thin tape (T-160 or the like) near the tape top. |
| Adjustment location | TG8 height adjusting screw |

**[Adjustment Method]**

1) Confirm there is no wrinkles of tape between TG8 and capstan and no tape curl at the upper or the lower flanges of TG8 during 10 seconds CUE running.
2) When there is curls or wrinkles, adjust with TG8 height adjusting screw.
3) Confirm there is no wrinkles of tape between TG8 and capstan and no tape curl at the upper or the lower flanges of TG8 during 8 seconds REV running.
4) When there is curls or wrinkles, adjust with TG8 height adjusting screw.

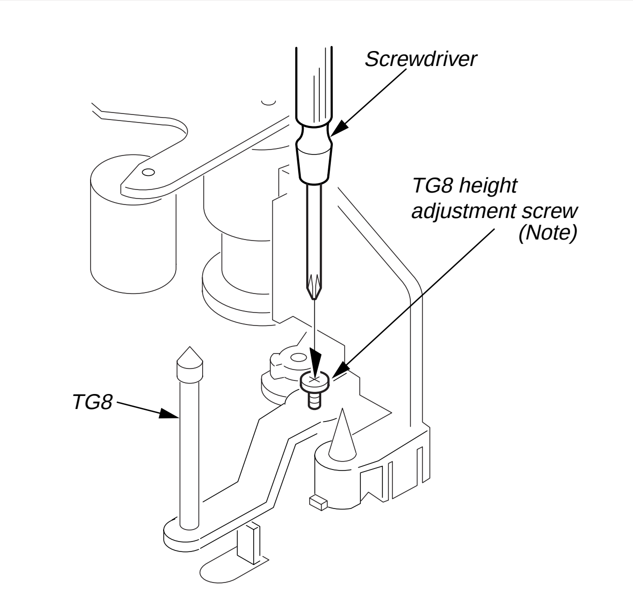


Fig. 4-9

### 4-1-8. CHECKING THE LINEARITY AND FLUCTUATION OF THE RF OUTPUT

1) Set the RF output to the maximum level using the tracking buttons.

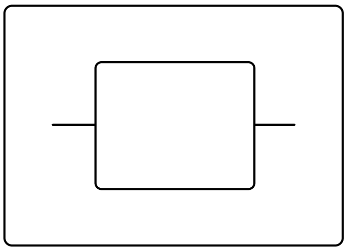


Fig. 4-10-1

2) Perform fine adjustment of the voltage level range of the oscilloscope, adjust the RF output deviation to within 6 gradations.

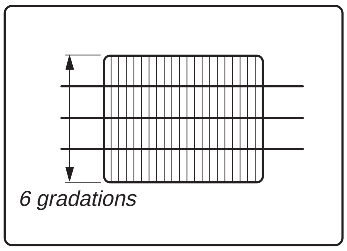


Fig. 4-10-2

3) Press the tracking buttons and adjust the maximum amplitude of the RF output to within 4 gradations.
4) At this time, check if the minimum amplitude is more than 2 gradations.

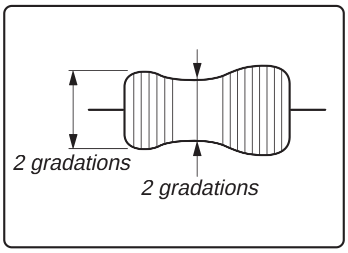


Fig. 4-10-3

5) Check that RF output fluctuation between minimum and maximum levels is within 13%.

# 5. EXPLODED VIEWS

**Note:**

- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.

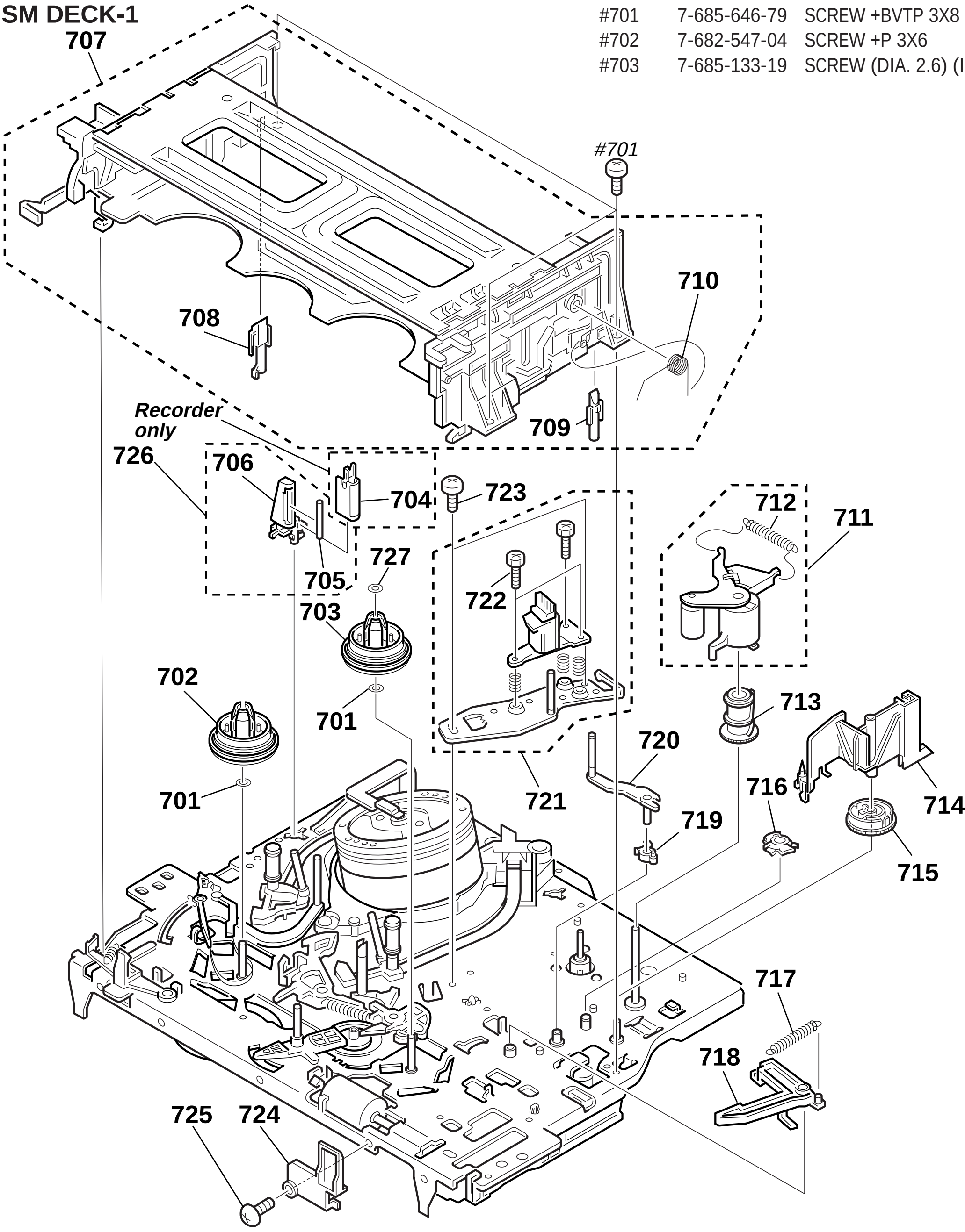
*************

HARDWARE LIST

*************

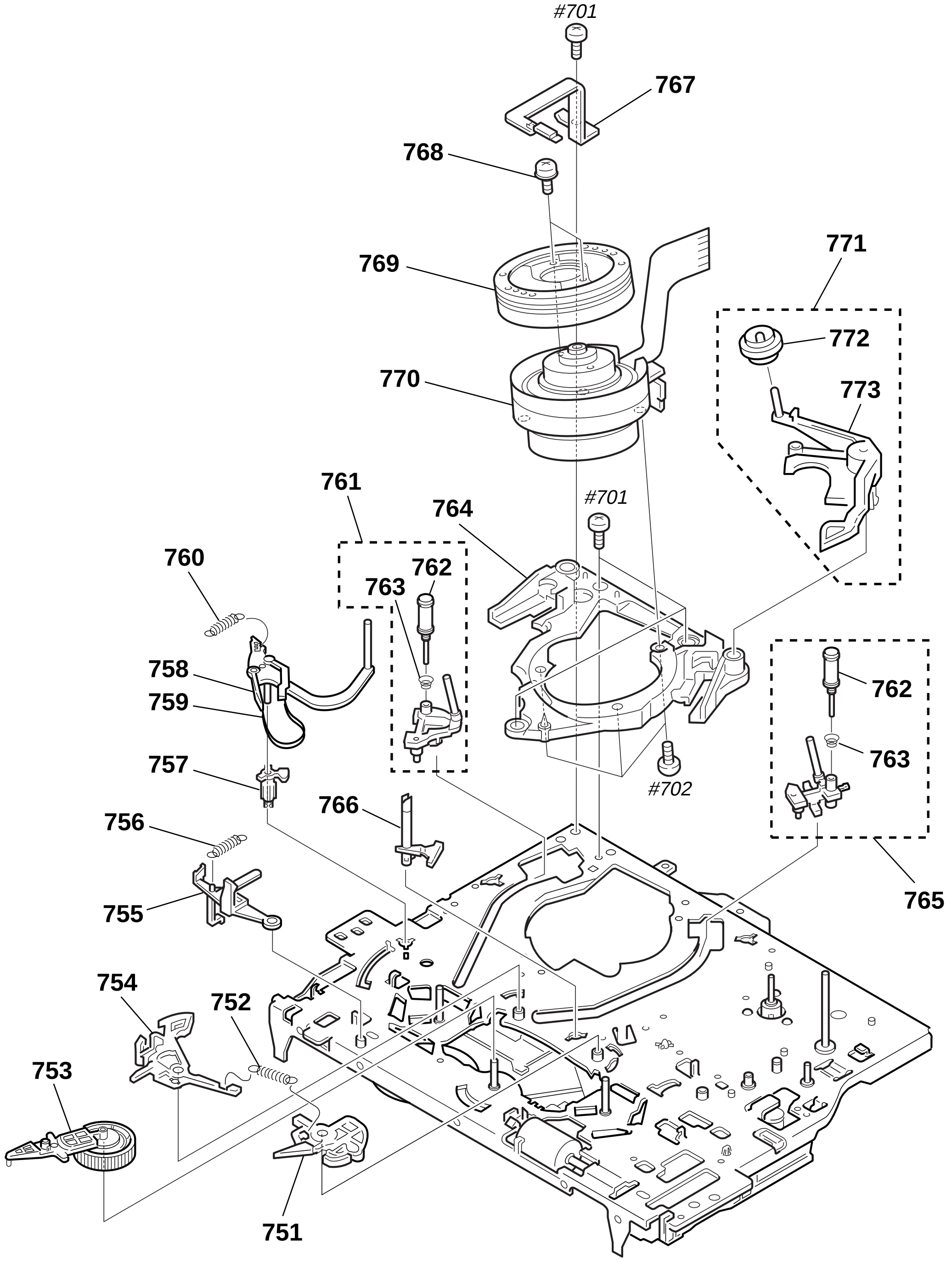
| | | |
|---|---|---|
| #701 | 7-685-646-79 | SCREW +BVTP 3X8 TYPE2 IT-3 |
| #702 | 7-682-547-04 | SCREW +P 3X6 |
| #703 | 7-685-133-19 | SCREW (DIA. 2.6) (IT3B) |

## 5-1. MECHANISM DECK-1



| Ref. No. | Part No. | Description | Remarks |
|---|---|---|---|
| 701 | 3-977-509-01 | WASHER, THRUST | |
| 702 | 3-977-507-01 | TABLE, REEL (S) (GRAY) | |
| 703 | 3-977-508-01 | TABLE, REEL (T) (BLACK) | |
| 704 | 1-500-144-11 | HEAD, FE (RECORDER) | |
| 705 | 3-977-495-01 | SHAFT TG2 (RECORDER) | |
| 706 | 3-977-494-01 | HOLDER, FEH (RECORDER) | |
| 707 | A-6759-619-A | FL COMPLETE ASSY BOARD, COMPLETE | |
| 708 | 3-977-535-01 | PLATE, LUMINOUS(END SENSOR) | |
| 709 | 3-977-536-01 | PLATE, LUMINOUS(TOP SENSOR) | |
| 710 | 3-970-471-01 | SPRING (DECK OPEN), TORSION | |
| 711 | A-6759-615-A | PRESS BLOCK ASSY, PINCH | |
| 712 | 3-958-455-01 | SPRING (PINCH), TENSION | |
| 713 | 3-977-447-01 | GEAR, ELEVATOR | |
| 714 | 3-977-514-01 | OPENER, LID | |
| 715 | 3-977-441-01 | GEAR, PINCH PRESSING | |
| 716 | 3-977-445-01 | GEAR, TG8 ARM DRIVING | |
| 717 | 3-977-465-01 | SPRING,EXTENSION(RVS BRAKE) | |
| 718 | X-3947-582-1 | ARM ASSY, RVS BRAKE | |
| 719 | 3-977-446-01 | GEAR, TG8 ARM | |
| 720 | X-3947-590-1 | TG8 ASSY | |
| 721 | A-6759-620-A | HEAD BLOCK ASSY, ACE (TDK) | |
| 722 | 3-974-556-01 | + HEXA TT 2.6X9 (TAPER) | |
| 723 | 3-979-508-01 | SCREW | |
| 724 | 3-978-485-01 | PLATE, GUIDE CASSETTE | |
| 725 | 3-696-519-01 | +P IT3 SCREW 3X8 | |
| 726 | X-3947-817-1 | FEH, ASSY (PLAYER) | |
| 727 | 3-977-443-01 | WASHER, STOPPER | |

## 5-2. MECHANISM DECK-2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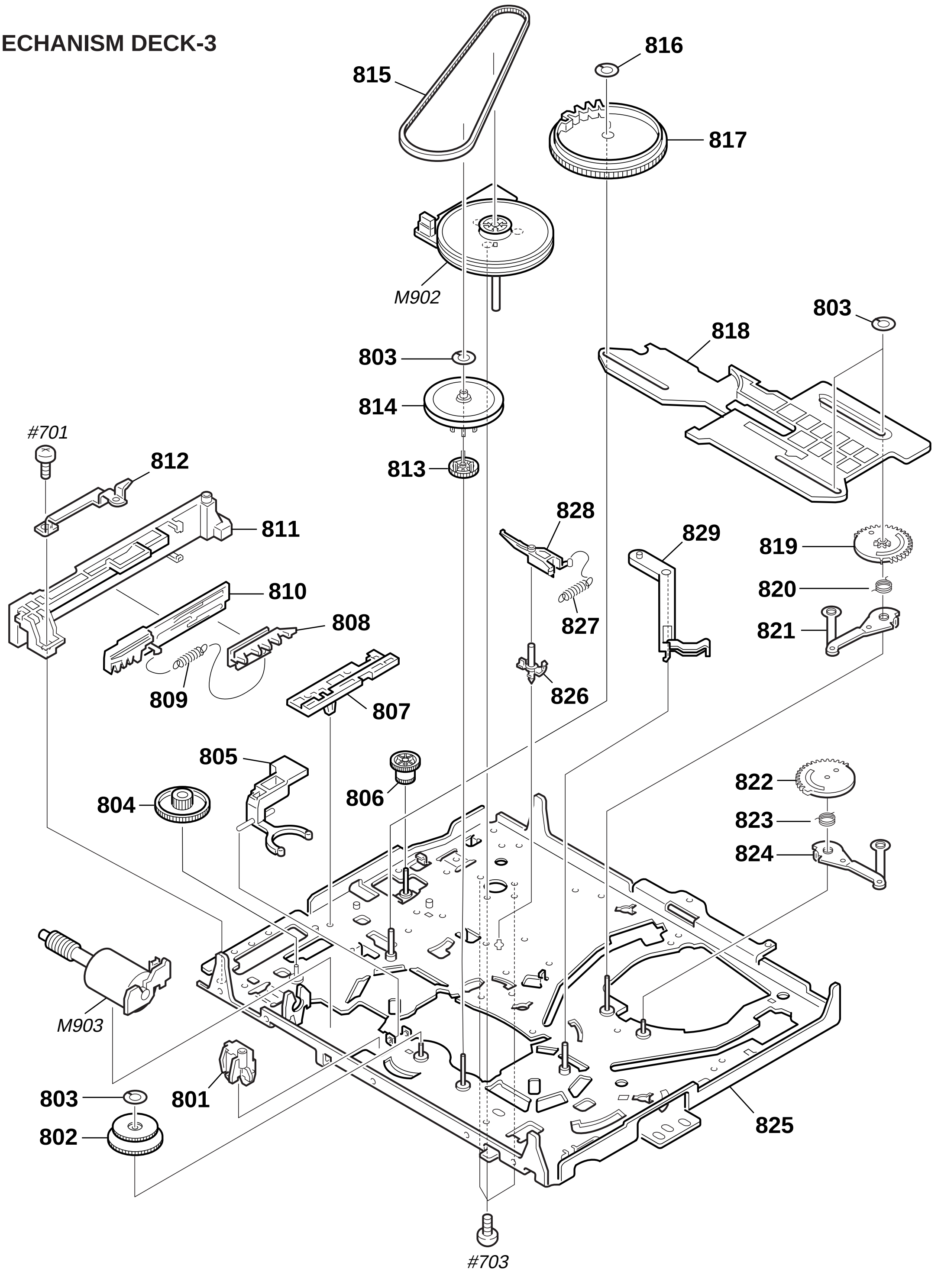
753
751

| Ref. No. | Part No. | Description | Remarks |
|---|---|---|---|
| 751 | X-3947-581-1 | BRAKE ASSY,MAIN(T) | |
| 752 | 3-977-462-01 | SPRING,EXTENTION. (MAIN BRAKE) | |
| 753 | X-3947-573-1 | ARM ASSY, PENDULUM | |
| 754 | X-3947-580-1 | BRAKE ASSY, MAIN(S) | |
| 755 | 3-977-513-01 | LEVER, REC. PROOF | |
| 756 | 3-976-767-01 | SPRING, TENS. (REC. PROOF) | |
| 757 | 3-977-487-01 | BOSS, TG1 FULCRUM | |
| 758 | X-3947-587-1 | TG1 ASSY | |
| 759 | X-3947-589-1 | BAND ASSY, TG1 | |
| 760 | 3-977-488-01 | SPRING (POWER TENSION) | |
| 761 | A-6750-324-A | SHUTTLE (S) BLOCK ASSY | |
| 762 | X-3944-378-1 | ROLLER ASSY, GUIDE | |
| 763 | 3-965-178-01 | SPRING | |
| 764 | 3-969-629-01 | BASE, DRUM | |
| 765 | A-6750-325-A | SHUTTLE (T) BLOCK ASSY | |
| 766 | 3-977-501-01 | PLATE, LUMINOUS | |
| 767 | X-3943-899-8 | GROUND ASSY, SHAFT | |
| 768 | 2-643-205-01 | SCREW | |
| 769 | Refer to the service manual for each model. | | |
| 770 | Refer to the service manual for each model. | | |
| 771 | A-6759-614-A | ROLLER BLOCK ASSY, HC | |
| 772 | X-3947-255-1 | ROLLER ASSY, HC | |
| 773 | 3-977-537-01 | ARM, HC ROLLER | |

## 5-3. MECHANISM DECK-3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M903
803
801
825
802
#703

| Ref. No. | Part No. | Description | Remarks | Ref. No. | Part No. | Description | Remarks |
|---|---|---|---|---|---|---|---|
| * 801 | 3-977-437-01 | RETAINER,CAM MOTOR | | 817 | 3-977-439-01 | GEAR, CAM | |
| 802 | X-3947-584-1 | ASSY, REEL DIRECT | | 818 | 3-977-442-01 | SLIDER | |
| 803 | 3-977-443-01 | WASHER, STOPPER | | 819 | 3-977-455-01 | GEAR, LOADING(T) | |
| 804 | 3-977-438-01 | WORM - WHEEL | | 820 | 3-977-456-01 | SPRING, TORSION (LOAD T) | |
| 805 | 3-977-506-01 | ARM, LIMITTER SELECTION | | 821 | X-3947-579-1 | LEVER ASSY, LOADING(T) | |
| 806 | 3-977-444-01 | GEAR, PINCH TRANSMISSION | | 822 | 3-977-451-01 | GEAR, LOADING(S) | |
| 807 | 3-977-515-01 | GUIDE, FL SLIDER | | 823 | 3-977-452-01 | SPRING, TORSION (LOAD S) | |
| 808 | 3-977-517-01 | PLATE, SLIDE, FL | | 824 | X-3947-578-1 | LEVER ASSY, LOADING(S) | |
| 809 | 3-977-519-01 | SPRING, TENS. (LIMIT, FL) | | 825 | X-3947-576-1 | CHASSIS ASSY, MECHANICAL | |
| 810 | 3-977-518-01 | PLATE, LIMITTER, FL | | 826 | 3-977-468-01 | SHAFT, CAPSTAN BRAKE | |
| 811 | 3-977-516-01 | HOLDER, FL SLIDER | | 827 | 3-977-467-01 | SPRING, CAP BRAKE | |
| 812 | 3-977-877-01 | PLATE, RETAINER | | 828 | X-3947-583-1 | BRAKE ASSY, CAPSTAN | |
| 813 | 3-977-504-01 | GEAR, CLUTCH | | 829 | 3-977-489-01 | ARM, TG1 DRIVING | |
| 814 | X-3947-585-1 | GEAR ASSY, PULLEY | | M902 | 1-698-971-11 | MOTOR, DC | |
| 815 | 3-977-510-01 | BELT, RUBBER | | M903 | X-3947-577-1 | MOTOR ASSY, CAM | |
| 816 | 3-977-440-01 | WASHER, STOPPER | | | | | |

9-921-647-11

**Sony Corporation**
**Home A&V Products Company**

97J1612-1
Printed in Japan © 1997.10
**Published by General Engineering Dept.**
**(Osaki East)**